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USSR Report

NATIONAL ECONOMY

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ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

ABALKIN EXAMINES NATURE, PROGRESS OF ECONOMIC RESTRUCTURING

13-15 November 1986 Conference

Moscow EKONOMICHESKAYA GAZETA in Russian No 46, Nov 86 pp 2, 4

[Article by USSR Academy of Sciences Corresponding Member L. Abalkin, under rubric "Discussion: Restructuring of the Economic Mechanism": "Production Relations and the Economic Mechanism." First paragraph is introduction by EKONOMICHESKAYA GAZETA]

[Text] The central board of the Economic-Science Society and the USSR Academy of Sciences Department of Economics, with the participation of the CPSU Central Committee's weekly publication EKONOMICHESKAYA GAZETA, on 13-15 November is conducting, in Moscow, in the Hall of Columns of the House of Unions, an All-Union Conference on the topic "Problems of the Scientific Organization of the Administration of the Economy." We are publishing below abbreviated texts of the reports prepared by the groups of researchers and specialists under the guidance of the leading scientists, which will be discussed at the plenary and section sessions of the conference. Other reports will be published in subsequent issues of EKONOMICHESKAYA GAZETA.

Restructuring the economic mechanism brings about the need for a thorough economic-policy analysis of a number of major theoretical problems. The role of theoretical generalizations, always important, becomes especially so at critical stages in social development. Under such conditions one can no longer hope for a smooth buildup of scientific knowledge or, in any practical situation, operate by trial and error. It is necessary to have fundamental generalizations that are based on an interpretation of historical experience and the nature of the tasks confronting society, to have a critical evaluation of the theoretical arsenal which has been accumulated and to reject decisively obsolete ideas and especially prejudices.

Interaction Between Productive Forces and Production Relations

Maintaining a dynamic correlation between productive forces and production relations is the chief and decisive condition for using the advantages of the socialist system and accelerating socioeconomic progress. As was shown by historical experience, this correlation is not the result of a one-time act that subsequently maintained itself, as it were, by itself, automatically.

Forms of socialistic production relations possess the property of becoming older, or lose their incentive role, and, in turn, develop into inhibitors of social progress.

Violations of the dynamic correlation between productive forces and production relations, which act as restraints on the development of socialist society, are of two types. Various aspects of production relations may lag behind the productive forces that have gone on ahead; this lag is linked to restraints on mature reforms, and with preserving management forms and methods that have developed historically at a certain stage.

A "rush forward" can also occur -- the consequence of attempts to implant those relations for which the necessary prerequisites have not yet developed, and simultaneously to limit artificially or discontinue economic forms that are adequate to the level of maturity achieved by society.

Noncorrelations of the second type, as experience has attested, exert no less a negative effect upon rates of socioeconomic progress than those of the first type. What occurs here is not the confirmation of more mature economic relations, but largely a formalization of those relations, supplementing them with chiefly volitional, administrative content; this inevitably is reflected in management methods. The very possibility of this "rush forward" is influenced not only by the general dialectics of interaction between productive forces and production relations, but primarily by that exclusive role that is played by subjective factors in socialist society, including the implementation of the interaction being considered.

In the development of productive forces evolutionary and revolutionary changes are always combined. The evolutionary changes that occur continuously determine the need for such a constant, continuous improvement of various aspects of production relations and concrete economic forms. The accumulation of such changes, as well as the qualitative, essentially revolutionary shifts in productive forces require the periodic conduct of a profound restructuring of the entire system of production relations, a radical reform of the economic mechanism as a whole.

Improvement of production relations and the resolution of contradictions between their concrete forms and the continuously growing level of productive forces occurs primarily by way of corresponding changes in the most flexible and most mobile segments of those relations, via their economic-organizational subsystem which forms the content of the economic mechanism. Precisely for that reason its adjustment and improvement emerge as decisive conditions for the effective and rapid development of the national economy.

Social Ownership and Economic Forms of Implementing It

A problem that is linked in the most direct manner with the search for ways to restructure the economic mechanism is that of creating and improving forms of its economic implementation that are adequate for social ownership. Here it is important to take into account the fact that relations of social ownership, in all their richness and depth, do not remain unchanged. The objects of those relations grow and become more complicated; changes occur in the

structure of ownership relations and in the forms and methods of combining producers with the means of production. In addition to the basic forms of social ownership of the means of production (public and cooperative-kolkhoz), a complicated structure of secondary, derivative forms is developing. The system of economic interests is also becoming more complicated.

Unfortunately, the political economics of socialism does not have available today any well-developed ideas, based on an interpretation of historical experience, concerning the structure of property relations. This weakens the theoretical foundation of measures being developed to restructure the economic mechanism.

A positive elaboration of the problem requires overcoming decisively single-plane, static considerations of property relations, a change from strictly abstract, speculative constructs to the theoretical assimilation of the real complexity of the object being studied. It is fundamentally important to overcome extremely simplified ideas, according to which the progress of socialist society allegedly leads to a leveling of economic forms, to monotony in the organization of economic life. Such ideas contradict the objective logic of life, and their retention serves as a major obstacle in the path for a search for effective and sufficiently flexible forms and methods of management.

The more developed the society is, the more varied the forms of economic life and the motivations of people's economic activity.

Socialist ownership manifests itself and is implemented economically in the movement of the social product and income through the concrete forms of production relations and economic ties, the organizational structure of production and administration, and the participation of the workers in the administration of production.

A special role among the forms of the economic implementation of ownership is occupied by the economic interests of society, its social segments and groups, labor collectives, and individual workers. The advantages contained in social ownership are realized more completely and more successfully as synchronization of the entire complicated structure of economic interests is better assured, and as the opportunities within each of these interests are manifested more fully.

Improvement of the forms of economic implementation of ownership and creation of conditions for converting its potential opportunities into reality depend, to a decisive degree, on the quality of the economic mechanism, on its prompt and well thought-out restructuring. Therefore reform of the economic mechanism is a necessary condition to assure the complete use of the advantages of the economic system of socialism and thus to bring Soviet society to qualitatively new levels.

In the process of this work it will be necessary to provide a correlation of forms of economic implementation of ownership, first, as to their content, that is, as to the nature of public appropriation, and, secondly, as to the particulars of reproduction at this stage in our country's development.

In principle we consider unacceptable any management forms and methods that are alien to social ownership -- anything that leads to crises, that causes anarchy of production and unemployment, class stratification of society, and the creation of unearned income. The nature of social ownership is also contradicted by everything that leads to the development of bureaucratic methods and of departmental and local interests, which alienates the worker from the means of production, that leads to his exclusion from the administrative process, that violates the principle of distribution according to labor, and that gives rise to a policy of egalitarianism.

The sufficiently mass, rather than individual, character of such phenomena, and their durability, attest to the inadequacy of the forms of economic implementation of socialist ownership which have developed in relation to its public nature. Herein lies one of the serious contradictions within the system of production relations, and herein one sees revealed and developed the contradictions between productive forces and production relations.

Resolution of this contradiction and a guarantee for the adequacy of the forms of economic implementation of social ownership in relation to its internal content characterize the inner sense and social content of a reform of the economic mechanism. But this presupposes the development of socialist self-government, active involvement of the masses in the administration of state and economic affairs, and the development in every worker of a feeling that he is one of the co-owners of social production.

It is no less important to resolve the specific contradiction between the legal form of ownership relations and their real economic content. This contradiction occurs or is aggravated whenever the law of state ownership coexists with an attitude to that property as being "no one's," when the worker in his real economic relations does not feel that he is one of the owners. This causes social passivity, gives rise to the mentality of being a dependent or a consumer, and weakens the moral underpinnings of socialism. In all such phenomena one sees revealed in the final analysis the inadequacy of the forms of the economic implementation of socialist ownership in relation to its inner content.

Planning, Complete Cost Accounting, Socialist Self-Government

When defining the content and directions for restructuring the economic mechanism it is necessary to take into consideration the level of socialization of production which has been achieved and the real structure of the national economy. It is fundamentally important that the country's single national-economic complex, acting as an indicator of the achieved degree of socialization of production, does not mean the elimination of the inner structure or the ties in that complex, or its conversion into a single combine or factory.

The existence, within the confines of a single whole, of links are relatively isolated economically is an economic reality. Acting as such links today are production associations and enterprises that are functioning on principles of cost accounting. As the primary links in the social division of labor, they

are socialist commodity-producers. Understanding this circumstance provides a clear point of departure for the entire job of improving the economic mechanism.

Raising the level of the planned organization of production is one of the most important trends in improving production relations, in the course of which there is a change in the appearance of the concrete forms and methods of that organization, as well as their renewal.

With the present-day scope of production and under conditions of its exceptional dynamism, the increase in the number and variety of its needs, and the acceleration of scientific-technical progress, it is necessary to have new, more flexible and more effective forms of the planned organization of production.

The search for such forms and their introduction must invariably take into account two spheres of planning. The first sphere encompasses the national economy as a single whole. Its structure, rates, and internal interconnections are the object of centralized planning regulation. Only the country's economic center is capable of making the most effective determination of a whole series of questions that encompass the functioning of the national economy as a single, integral organism. This is achieved through broad use of the target-program, balance-sheet, and normative methods of planning.

There also exists a second sphere of planning management, which encompasses the regulation of the economic activity of the primary links in the national economy -- the associations and enterprises. This sphere differs from the first one in its methods, goals, and the means of exerting an effect upon economic life. The resolution of the internal questions of an economic link's functions can be transferred to each such link and its labor collective for consideration. Maximum expansion of the initiative and independence of economic links and labor collectives does not deny or contradict the necessity to intensify centralized principles in the resolution of strategic questions in the development of the national economy.

These, then, are the theoretical foundations of the methods that are being developed and that are undergoing practical tests -- the methods of self-financing, of converting enterprises and associations to the principle of complete cost accounting, repayment of their costs, and self-financing. This, in its turn, presupposes the broad use of commodity-monetary relations in conformity with their new social content that is immanent to socialism.

These very complicated theoretical questions also include issues of delimiting spheres of competency at a particular level of management, of methods of agreement and coordination in their resolution.

A well-principled approach to the criterion of such a delimitation is linked, in our opinion, to an understanding of the national economy's integrated nature. All the questions that pertain to the functioning and development of the national economy as a single whole are the prerogative of the economic center. These are, first of all, the development and implementation of a

single scientific-technical policy, structural policy, investment and financing policy, and price and income policy, and, secondly, the determination of the general management conditions, that is, the forms and methods of including the primary links in the single national-economic organism.

Under the present-day conditions one of the most important areas in the restructuring of planning is the changeover to the formation of a production program for enterprises and associations on the basis of economic contracts. Preparation, conclusion, and implementation of contracts are becoming not a formal act, but, rather, a component and very important part of the organization of planning work, and they include it in the real system of economic (and not only the purely administrative) relations.

The most flexible and effective means of coordinating the two mentioned spheres and of correspondingly joining the interests of society and the labor collectives is the broad use of the normative method in planning. It is fundamentally important that, with this approach, planned organization of social production is supplemented by real economic content, and specific forms of production relations are tuned to the mode that assures the most effective management.

Coordination of the two spheres of a planned organization of production requires adjustment of the effective interaction of direct ties in the mechanism and feedback. The more extensive and more complicated the national economy is, the more important it becomes to have this interaction as an invariable condition for strength and integrity in the national-economic system and to attain high final results.

Reinforcement of feedback under present-day conditions is inseparably linked with further development and activation of commodity-monetary relations, with the introduction of complete cost accounting and the principle of self-financing. The concept of self-financing represents a further development of Lenin's ideas concerning cost accounting and the repayment of one's costs as applicable to new historic conditions. It presupposes a changeover to a cost-accounting basis of all types not only of current economic activity, but also of expanded reproduction, financing scientific-technical progress, and remodeling and technical re-equipping enterprises currently in operation. This presupposes the broader development of credit relations in the national economy as an important lever for providing economic incentives to production associations and enterprises.

The achievement of a balanced situation in the economy and the creation of a system of planned reserves, which is an important task for the economic center, create prerequisites for a gradual rejection of the funded distribution of resources and for a conversion to wholesale trade in the means of production. This will make it possible to use actively commodity-monetary relations in their function of encouraging scientific-technical progress and increasing efficiency of production.

Development of cost-accounting relations is inseparably linked to an intensification of the independence and economic responsibility of labor

collectives, and with the deepening of differentiations in payment to labor. To the degree that this differentiation reflects the real difference in individual and collective labor, it is socially justified and acts as an important lever for intensifying production. A question that is complicated and that continues to be incompletely clear is that of the achievable limits of this differentiation, which are dictated by the nature of social ownership, with consideration, on the one hand, of the need for social guarantees and, on the other, the inadmissibility of the stratification of society.

Carrying out restructuring in the economic mechanism actualizes the political-economic development of problems of the economic content of competition, including competitiveness and the use of contests (in production, the scientific-technical sphere, and in the credit sphere). It is also important here to differentiate between the national-economic sphere and the local spheres (branch, region, primary link).

On a national-economic level the resolution of many questions is, as has already been mentioned, the prerogative of the economic center. One means of combatting undesirable situations that arise in this sphere (bureaucratic attitude, subjectivism, and other manifestations of a departmental approach to economic decisions) is the broad development of democratic principles -- publicity and control carried out by the masses and the representative agencies of the people's self-government.

Among the measures in the fight against departmental provincialism, local interests, and the prevalence of group interests, a special place belongs to the development of real economic competition and competitiveness as immanent aspects of socialist production relations.

A very important task in restructuring the economic mechanism is the creation of the most favorable conditions for the appearance of opportunities contained in the new status of the working man in a socialist society. Granting broad rights to independent economic links and their labor collectives, along with an elevated sense of responsibility for the final results and with developed forms of democratic control and administration allows for the creation of such conditions to the highest degree.

Participation in administration represents one of the most important forms of implementation of social ownership and generalizes this goal the most. By judging how developed that participation is and by judging its totality, one can get a sufficiently reliable idea of the maturity of social ownership itself. Thus the development of democratic principles in administration to a large extent overlaps with and intertwines with the improvement of production relations and with the multifaceted aspects of increasing the participation of the human element.

Today the processes which are becoming urgent tasks in accelerating our country's socioeconomic development are the provision of instruction in those skills required for administering production and the assimilation of those skills by the masses. This requires the formation in every worker of sufficiently developed and truly modern economic thought processes.

Abalkin Interview

Moscow ARGUMENTY I FAKTY in Russian No 44, 28 Oct-3 Nov pp 1-2

[Interview with L. I. Abalkin: "How the Restructuring Is Proceeding" First paragraph is ARGUMENTY I FAKTY introduction]

[Text] We are continuing to publish the discussion that our correspondent N. Zhelnorova had with director of the USSR Academy of Sciences Institute of Economics, USSR Academy of Sciences Corresponding Member L. I. Abalkin on key questions of the economy.

Question. Leonid Ivanovich, what is the importance of the current 12th Five-Year Plan?

Answer. This is an important preparatory stage, a stage of experimental verification of the individual elements of the economic mechanism. In order to include the new mechanism in the 13th Five-Year Plan we have only two years remaining, and that is a rather short period of time. And this has to be done at the initial stage. We must not allow a situation occur such that when the five-year assignments are apportioned out to all the branches and enterprises, it is only then that the economic mechanism is "nailed down."

We say "stable five-year quotas;" we cannot introduce those quotas in the middle of the five-year plan. For the 12th Five-Year Plan they are already too late. But we cannot be too late for the 13th Five Year Plan: by 1988 everything has to be apportioned out in rough form, and two years remain for modification, polishing, coordination, and the establishment of directive decisions. As you can see, that is not much time. Many of the progressive elements of the mechanism must be operating in the next five-year plan.

Question. Although a short period has gone by -- just half a year -- can you tell whether you can see any changes?

Answer. One experiences contradictory feelings when one analyzes and observes this process. There are, indeed, changes. Possibly they have been maturing less noticeably than one would want, but there have been changes. Changes in people, especially at the lower level of administration. They have a large amount of enthusiasm, the desire to do something, to test themselves. True, when managers are being assigned to a new position, it does not always happen that absolutely all of them have a clear idea of what they must do. But the rebirth of hopes, the readiness for changes that one sees maturing in society, constitutes one of the most important prerequisites for acceleration and is of greater importance than any technological scheme, even the most progressive one. The most important thing is that people are developing intolerance toward many undesirable situations which previously were perceived as inevitable.

A number of very bold, far-reaching decisions have been made -- those dealing with the APK [agroindustrial complex], and with local industry. For the agroindustrial complex, for example, with the sale of output produced in

excess of plan and part of the planned output, with the granting of the opportunity to barter among regions, real incentives have appeared. But it is necessary to introduce them and to reinforce them with good organizational work.

Restructuring is under way. Yes, it is moving slowly, and it is not proceeding everywhere as one would like. But at the same time one cannot fail to see changes nevertheless have been made.

Question. But what hindrances have there been along the way?

Answer. I want to emphasize that the stagnant phenomena of the past three five-year plans, movement along old paths of development, were aggravated by economic causes, by the appearance of disproportions, by the obsolescence of management forms and methods which at one time had been an incentive for development, but which now have become an inhibiting factor. This was also complicated by a number of political factors: insufficient development of democratic institutions; lack of necessary publicity; and poor monitoring of the activities of a number of state administrative agencies. But the chief hindrance is the fact that people do not give up the old without a struggle. Obvious bureaucratism is currently a frequently observed phenomenon which can be ridiculed. The bureaucrat can be besieged and chased out of his job once and for all.

But this phenomenon is more complicated than appears at first glance, and consequently it is more difficult. Take, for example, the workers in the central economic agencies. These are people who are utterly devoted to their job, people who work, as the expression goes, to the point of wear and tear, 12-14 hours a day. But many of them, who are bound by tradition, fail to understand that their actions and their convictions have now become an inhibiting factor and are impeding progress. And so, in everything that is new, they see practically the undermining of the foundations of socialism.

How can we combat this? There are no simple decisions. What we need is an entire system of measures. We need science, publicity, open discussion of these questions. We need the democratization of these administrative procedures. We need the formation of new public opinion, and we have to get rid of obviously unsuitable persons and bureaucrats. We need a system both of personnel measures and of measures to provide ideological support. People have to become completely aware of the essence of the changes.

What can I say definitely? People today, for the most part, have not yet understood the meaning of the Congress' decisions. They have not understood the meaning of restructuring or acceleration.

Question. Why do you make that categorical conclusion?

Answer. I make it because of practical reasons. What is acceleration, anyway? It is not a short-term campaign. It is a strategic course that has the goal of bringing the economy to qualitatively new heights. It is inadmissible to reduce the problem simply to quantitative aspects of the job at hand, to growth rates. Yes, we have to increase growth rates with respect

to those low rates that occurred in the late 1970's and early 1980's. But the planned assignments for the year 2000 are at rates lower than the rates at the beginning of the 1970's. And what about national income and industrial output? Lower!

Question. And you consider this to be normal?

Answer. Yes, we do not need rates that are excessively high. The orientation of those rates is the result of a "gross" approach, when everything is dumped into a single heap and we evaluate the phenomenon only from its purely quantitative aspect.

For example, we must double the national income and reduce its metal-intensity by one half. Consequently, we must have, during a 15-year period, a zero increase in steel smelting. For the 12th Five-Year Plan there has also been indicated a zero increase for pig iron and a minus growth for coke. But if one adds up everything -- pig iron, rolled metal, and coke -- this will have an effect on the growth rates for industry as a whole. Thus, the total, or gross, growth rate of output can no longer be a criterion of progress.

It is necessary for us to increase the output of machine-building industry during this five-year plan by 43 percent. But we must have a 43-percent increase in the output of machines other than what we are producing today. We no longer need that kind. We need other machines.

At the present time in our country the amount of metal-processing equipment with regard to the number of units, is greater than in the United States, West Germany, and Japan, taken together. And we do not need any more of that equipment. We produce 1.5 times more footwear per capita of population than in the United States. But what is important is not how much footwear we have. It is better to have one good pair of shoes than two bad pairs. We have enacted a decision that, starting in the new year, we will reject in light industry the establishment of directive assignments for increasing the volume of production both in monetary and in physical terms. This decree corresponds to the congress's ideology, its orientation on the final result and on satisfying the nation's needs. But if the USSR Ministry of Light Industry develops a plan that provides for zero growth next year, Gosplan will "twist its arm" and force it to guarantee growth irrespective of quality. And what do people do in the outlying areas? In the outlying areas they organize a competition, because the course is aimed at acceleration, and they increase rates.

That is why I say that by no means everyone understands the essence of the Congress decisions. And this is understandable, because for dozens of years we have been persuading people: "Produce a bit more." And now it is no easy matter to reject what is customary. Take shoes again. It is necessary to make shoes that are no worse than English, Yugoslavian, or Italian shoes. No worse! Then there will be acceleration.

We have today the modern, realistic dynamics for intensive growth, which do not fit into the concept of rates. Here is a classic example. The expansion of socialist reproduction without quantitative growth. Before the year 2000

we do not have to increase our engineer training, but we must guarantee the expanded reproduction of engineer cadres on an intensive basis.

What do I have in mind? Quality of training, conformity of the training to basic areas in scientific-technical progress, rapid renovation of knowledge, and conformity of that knowledge to the rates of renovation of technology and technological schemes. But I mean reproduction that is expanded not in the traditional understanding of quantity, but in the sense of its quality. It is necessary to find a method of measuring the quality of growth, because the essence of acceleration lies in the new quality of growth, as was stated at the Congress. Is this understood by the public? I think that it is not yet understood. And the reason why it is not is that many of us -- scientists, propaganda specialists, and workers in the mass media -- have not yet assimilated that ourselves, and that is why we see continued explanations and the demonstration of our successes by using old, traditional methods.

Question. Leonid Ivanovich, what is your opinion about our need for state subsidy? According to several people, frequently state subsidy changes from being a social good into being a social evil, inasmuch as a definite category of people indirectly use a subsidy as a source of unearned income.

Answer. Such rather complicated phenomena do not have an unambiguous resolution. The more professional a person is and the more deeply he knows the question, the more difficult it often is to give an unambiguous answer. There are definite subsidy spheres that are objectively necessary as a system of social guarantees, beginning with subsidizing enterprises engaged in the production of children's clothing and ending with the housing sphere.

We must look truth straight in the eyes. We have segments of the population that are not well to do, that have a low income level, and that income will rise insignificantly during the immediate future, inasmuch as it is necessary for us to encourage machine building and to increase pensions and the salaries paid to doctors, teachers, and kindergarten workers. Consequently we must provide the public with a social subsidy -- at the level of a definite guaranteed minimum.

As for housing, every individual must receive a definite number of meters of housing at an inexpensive rate, and this is subsidized by the state. But simultaneously it is possible to do away completely with subsidies or to increase sharply the rates for housing in excess of norm, or for housing of improved quality. And we must insist on having no subsidy, but instead, having payment at "top ruble" -- for any excesses.

It is necessary to expand cooperative construction, but, once again, we cannot change everyone to cooperative construction. Forcing a nurse to buy a cooperative apartment is, understandably, not the resolution of the question. There must be a scientifically substantiated proportion, when the benefit is socially guaranteed for the citizen and when it is an ordinary commodity that is bought and paid for in accordance with the laws of commodity-monetary relations.

Question. Many people are wondering whether the time has come for a second NEP [New Economic Policy].

Answer. Historical parallels such as this are very arbitrary. The NEP is a policy that was excellent for its time, a great outburst of genius, and evidence of political wisdom.

One can say only that at the present time we have a change in the existing mechanism that is just as profound, just as radical, just as fundamental with respect to the previous mechanism as the NEP was with respect to War Communism. Not from the point of view of a repeat, but from the point of view of its radical nature. But now we have another time, another economy, another scope of production, and, in the final analysis, other people. But there must be just the same kind of striking turning point as during the NEP.

Question. Would it be possible, instead of using the word "NEP," to employ the term "cost accounting," including within it the concept of the "accountability of the owner," that is, putting the collective owner of production in those conditions in which, as he receives an advantage for himself, he also provides an advantage to society as a whole?

Answer. That must be done. One of the most important elements of the restructuring is a return to someones of the sense that he is one of the owners with respect to the job being done, to the output, and to the means of production -- that is, overcoming the alienation of the person from administration. That is one of the central ideas of restructuring. Moreover, it is one of probably the most complicated and deep-seated ideas. But nevertheless it is only part of what has to be done. The economy is a thousand times more complicated, and the system of measures that we much use is also much more complicated than simply cost accounting alone. We need a strategy. We need large-scale strategic decisions in the economy, decisions of a structural order, which do not fit simply into the concepts of cost accounting or even a thrifty attitude toward the job at hand. One could cite as examples many miscalculations that we have made, both large and small, beginning with the building of nuclear power plants next to large urban populations. We have seriously neglected transport. That is a serious miscalculation of ours which cannot be corrected simply on the basis of cost accounting alone. We need other structural and strategic decisions.

Or take another example. The prolonged orientation on the importing of finished technological equipment in the chemical industry, the lack of development of our own machine building, and the gradual dependence upon other countries for the repair, technical maintenance, and modernization of that technology.

We had to purchase a dozen plants, build them, and begin rapidly to produce technological output. But we elevated this partial resolution, these tactical measures, to a strategic line and invested colossal amounts of money in the raw-material and extractive branches. So you can see that this is not being resolved simply. We have here a different, broader concept of "owner," this time on the statewide level, not simply cost accounting.

Yes, cost accounting is necessary. We cannot do without it. Without it, much would hang in mid-air. But this is only a link in the system. It may be the main link, but it is one which also will not provide anything without all the remaining links.

I am again bringing my line to comprehensiveness, to the systems approach. And no mechanism, without publicity, without democratic principles, without, say, the right of the Komsomol to dispute certain decisions, without respect for the person, will yield any results. Herein lies the complexity of the forthcoming restructuring, as well as the fascination of our time, when we are dealing such global, truly revolutionary reforms.

5075

CSO: 1820/37

AGRO-ECONOMICS, POLICY, ORGANIZATION

SUPPLY PROBLEMS IN COOPERATIVE, KOLKHOZ MARKETS DISCUSSED

Moscow EKONOMICHESKAYA GAZETA in Russian No 46, Nov 86 p 15

[Article by economists A. Bernvald and Ye. Silayev: "Isolation of Partners: How Can It Be Overcome?"; first paragraph is source introduction]

[Text] Novosibirsk Oblast--The fall season under the conditions of Siberia is a most intensive period for the procurement of agricultural produce. The fact is that this is the time when vegetables and potatoes become ripe for harvest and when the mass harvest of fruits, wild berries, mushrooms and pine kernels goes into full swing.

And immediately the rural resident faces the question of what to do with the surpluses of agricultural output and the gifts of the forest. Should he sell them to the local kolkhoz or sovkhov, state processing enterprise or public catering, enter into a contract with a consumer cooperative, or sell the output himself in the market?

As a rule, preference is given to the purchasing agent who without delay can help deliver the output to the place of sale or buy it right there on site and who can provide additional services in the development of the private plot (sale of commodities in great demand, implements of labor, mineral fertilizers, seeds, etc.).

Do the consumer cooperative organizations that appear in the role of purchasing agents of surpluses of agricultural products from the public have such possibilities?

When the "Private Owner" Is in High Esteem

Without touching upon many other questions in the work of the consumer cooperative, we will take up one: its role and place today in the agro-industrial system, where it is represented as a relatively independent subsystem that has preserved its own cooperative property and organizational structure of management. Indeed, as was noted at the 27th CPSU Congress, such a form of ownership has not exhausted its possibilities in socialist production.

At the present time, however, cooperative workers are acting separately, as it were, without doing much to coordinate the size of procurements with rayon agro-industrial associations [RAPO's]. In any case, that is how they are acting in Novosibirsk Oblast and they are losing quite a lot thereby.

Here is a simple example of this. In the procurement of output, representatives of consumer cooperatives often cannot meet the competition from kolkhoz markets. Why? The fact is that the market workers guarantee transportation for the delivery of output, a services office, a refrigerator, and their own selling price. Cooperators cannot offer such conditions and lose.

Here are only a few data only the management of the markets in Novosibirsk in 1985 (in tons)

Types of Produce	Sold by the Urban Cooperative Trade Organizations	Sold Through the Market Services Offices	Sold by Private Persons
Meat	1,120	569.9	3,733.7
Potatoes	-	2.6	7,854.9
Vegetables	-	143.6	3,969.0
Lard	-	0.5	243.0
Fruit	-	211.3	4,516.5
Berries	-	14.3	808.3

Under such circumstances, of course, cooperative workers have no direct influence on the market price of any of the products except meat. Hence the typical picture that the town dweller continually encounters: the private owner sells potatoes, vegetables, fruit and wild produce, including mushrooms, cranberries, mountain cranberries and pine kernels, at an exorbitant price.

Meanwhile, under the conditions of the RAPO's, it has become possible not to disperse efforts in the procurement, processing and sale of agricultural produce but, on the contrary, to unit them. Unfortunately, this possibility is still far from having been realized. But its realization will contribute to the better provision of the population with all sorts of output and to a lowering of the market prices for it. This is especially important now, when the kolkhozes and sovkhoses have been given the right to sell 30 percent of the planned production of fruit and vegetables and potatoes and the entire above-plan output at their own discretion.

Three Prices in the Kolkhoz Market

In April of this year, the management of the markets of Novosibirsk proposed to 20 oblast kolkhozes and sovkhoses that they enter into agreements on the delivery of horticultural production. It was proposed that they sell 120 tons. Special pavilions were built in the market. Those that responded to this proposal were convinced of its mutual advantages. Thus, Morskoy Sovkhoz delivered 600 kilograms of green onions to the trade services office in June. Three sales people of the services office sold them within 4 hours. And on the next day, the sovkhos vegetable output was sold in the market at a

relatively low price of 30 kopecks per kilogram. But there are still few farms that want to sell their output in the market. Fall trade fairs that were carried out under the schedule of the local consumer cooperative also did not produce any substantial changes in the organization of trade in horticultural output. In summary over 8 months, oblast farms sold only 150 tons of vegetables, fruit and berries in the market, cooperative workers sold 50 tons, and 90 tons were sold through the trades services offices.

In other words, not everything turned out as expected. But even this first joining of forces revealed many positive aspects. First of all, it had a favorable impact on market prices, which was immediately the talk of the entire city. There are some other curious facts. During the summer months of this year, there were fewer traders in the city markets than there were last year but significantly more output was sold. Here, of course, a role was played by the strict sanctions within the scope of the campaign against unearned income but still the main factors, in our view, were the price for output, which was significantly lower at the farms and consumer cooperatives, and the system of contracts with sovkhoses of other cities, in particular from Alma-Ata Oblast.

Some new problems arose here, however. There were three prices in the market, three of its "own" approaches and systems, and three policies for the formation of prices. As a result of this, it is difficult to strengthen the influence of cooperative trade and the agricultural industry [agroprom] and one-time trade fairs do not permit the establishment of stability in the amount of produce coming to the market and therefore any operational impact on prices. It can be said that there were no coordinated actions. The market management cannot even call to account those entering into a contract for failure to fulfill it. As E. Kirillova, chief manager of the markets, stressed to the oblast agroprom, it is necessary to take this important matter more seriously.

This reproach must be addressed mainly to the oblast union of consumer societies and to the oblast management of trade responsible for the markets. After all, the decree of the USSR Council of Ministers "On Measures to Strengthen the Campaign Against Unearned Income" also committed these organizations to take measures to improve the organization of the work of the markets.

If Forces Are Joined

Agroprom as well as the consumer cooperatives and trade have many of "their own" problems and shortcomings. They can be praised for some things and rebuked for others. But there is hardly any sense in dispersing resources, dividing them into "yours" and "ours" in the procurement, processing and sale of output. The combining of forces and their coordination could accelerate the resolution of standing problems.

In this connection, we consider that it would be expedient to establish a single cost-accounting procurement and trade association as a constituent subdivision of agroprom. In our view, its organization on the scale of the

rayon or oblast will help to facilitate, simplify and make effective the ties of consumer cooperatives not only with kolkhozes and sovkhozes in the sale of output in the markets but also with the processing sectors of agroprom. What kind of a system is it when output procured by cooperative workers is lost because of a lack of processing capacities but neither the local meat combine nor the food combine will take it for processing? The enterprises of consumer cooperatives are taking exactly the same position in relation to the output of other organizations.

A single authority for the planning of procurements, processing and sales could more intensively resolve such urgent problems of cooperative workers as the provision of transportation through APK funds during the seasons of mass procurements and the coordination of the planning and financing of construction.

In the plans of the Novosibirsk Oblast Consumer Union for the 12th Five-Year Plan, it is written, in particular: together with kolkhozes and sovkhozes, construct 471 stores and 119 receiving centers for procured products. We note--"together." This example speaks once again of the benefit of the establishment of a single cost-accounting procurement and trade association.

9746

CSO: 1824/66

MINISTER ON LIVESTOCK, FEED MACHINE-BUILDING TASKS

Moscow EKONOMIKA SELSKOGO KHOZYAYSTVA in Russian No 10, Oct 86 pp 19-26

Article by L. Khitrin, USSR Minister of Machine Building for Animal Husbandry and Fodder Production: "Machine Building for Animal Husbandry and Feed Production During 12th Five-Year Plan"

Text The tasks for developing machine building basically in accordance with new developments, as clearly formulated in the Political Report by the CPSU Central Committee to the 27th party congress and in the State Plan for the Economic and Social Development of the USSR During the 1986-1990 Period, were approved during the June (1986) Plenum of the CPSU Central Committee and confirmed during the Fifth Session of the USSR Supreme Soviet, 11th Convocation. "The decisions handed down" commented M.S. Gorbachev during a plenum of the party's central committee, "are oriented towards converting our economy over to the rails of intensive development based upon the accelerated introduction of scientific and engineering achievements."

The chief requirements arising from the more important party and state solutions and being imposed upon machine building workers in behalf of animal husbandry and feed production are to achieve improvements in the quality of the products and raise the reliability and technical level of the machines. Only on this basis is it possible to solve successfully the problems concerned with satisfying completely the requirements of the rural areas for the needed technical resources.

The implementation of the program planned for the technical equipping of agricultural production is producing positive results.

The capabilities of the specialized branch of machine building have increased noticeably. From year to year, increases are taking place in the deliveries of equipment to animal husbandry farms and in the production and processing of feed and industry is producing more than 600 types of technical equipment. Over the past two five-year plans, the deliveries of these types of equipment have increased threefold, the power-worker ratio has been raised and the machine-tractor pool has been renovated from a quality standpoint.

In 1985, the level of complete mechanization of labor processes on cattle farms was 55 percent, in swine husbandry -- 72 and in poultry raising -- 84 percent.

At the same time, some large-scale shortcomings in the formation of the structure of agricultural equipment for animal husbandry and feed production have still not been overcome. Only 13 percent of the technical equipment developed during the 11th Five-Year Plan is aimed at mechanizing technological operations which were carried out manually earlier and 87 percent of the new machines that have been created are replacing obsolete designs and in this regard no basic changes have been introduced into the agricultural production technology. Although new technical equipment is being employed on the livestock farms, use is also being made of old items of low productivity equipment. In addition, extensive use is being made of manual labor. At the same time, roughly one fourth of the machines for animal husbandry and feed production, written off because of low quality, are not reaching their established amortization periods.

The scientific-research and design organizations and also production associations, in evaluating the status of affairs in an exacting and objective manner, have defined and are implementing for the 12th Five-Year Plan large-scale measures for accelerating the design of machines and equipment for animal husbandry and feed production and raising their quality, reliability and technical level. All of the branch's workers are displaying a high degree of responsibility as they purposefully strive to carry out these important tasks of state importance.

What are some of the directions being taken in carrying out this work?

First of all, highly productive and economic equipment is being created based upon the latest achievements in scientific-technical progress. By 1933, all products being produced by the branch will conform to the international technological level. The plans call for the annual renovation of 11-12 percent of the nomenclature of machines or the production of twice as many machines as were produced during the 11th Five-Year Plan.

The five-year plan calls for high rates of growth for the production volumes and improvements by enterprises and organizations in the utilization of their production-economic potential. Compared to the level for 1985, the production of machines will increase by a factor of 1.5, with a specific reduction taking place in expenditures of rolled metal and other materials. The overall technical-economic indicators for branch development during the 12th Five-Year Plan describe rather fully the extent of the tasks, the rates for converting enterprises and organizations over to intensive factors for development, the volume and character of production reorganization, labor organization, the introduction of new technological solutions and the need for taking action in connection with all progressive organizational-technical measures.

The engineering level of the machines created must ensure a return from the technical and economic parameters embodied in them and the growth in productivity must surpass the increases in the prices for the new equipment.

During the 12th Five-Year Plan, the design and production collectives of Minzhivmash /Ministry of Machine Building for Animal Husbandry and Feed Production/ plan to develop and master the production of new and modernized machines for feed procurement, feed preparation, for the mechanization of animal

husbandry and poultry raising farms and for applying organic fertilizers. The machines to be produced will make it possible to form 147 technological complexes and completed technological lines and this will ensure an increase of 12-15 percent in the complete mechanization of the principal labor processes in animal husbandry and feed production. Over the course of the five-year plan, 160 types of technical equipment which are not in keeping with the modern level will be removed from production.

According to data supplied by the scientific-research organizations for agriculture and industry, the deliveries of the new equipment in the planned amounts will make it possible to release considerable labor resources for other work at the kolkhozes and sovkhoses and to realize a national economic savings in excess of 3.5 billion rubles.

In developing their production program, the industrial workers base their position upon the fact that the new technical equipment must be reliably supplied with spare parts. By means of new designs, the use of progressive materials, improvements in the corrosion stability of units and other measures, the service life of the principal machines on the farms and the equipment for the production and procurement of feed on the farms will be raised by 15-25 percent during the 12th Five-Year Plan. In developing the five-year plan, definite types of equipment were defined which the agro-industrial complex is experiencing a special need for at the present time.

Feed production is the foundation for developing animal husbandry. The plans call for measures aimed at satisfying the requirements of the rural areas for machines for procuring feed, for raising their quality and reliability and for ensuring that spare parts are available for these machines.

The production of feed harvesting combines will increase in 1987, with the requirements of the rural areas for these machines being satisfied by 87 percent. By the end of the five-year plan, an annual production of feed harvesting combines will be achieved which will make it possible to satisfy fully the feed production requirements for these types of equipment. Agriculture will also be supplied with KPKU-75 and KPI-2.4 feed harvesting combines, for which there is a great demand among rural workers, and in quantities which will make it possible to satisfy the declared requirements of kolkhozes, sovkhoses and other agricultural enterprises.

A most serious problem continues to be that of raising the reliability of self-propelled feed harvesting equipment. The combine builders have accomplished a great deal in the interest of improving this work and they are carrying out specific measures aimed at raising the quality and reliability of the machines.

What are these measures?

First of all, new technical solutions have been incorporated in the design for the KSK-100 self-propelled combine and some weak elements have been replaced. Use is being made of a good design for a milling unit of reduced weight and having thin blades. The reversing gear working organs and the support for the anti-cutting beam have been replaced and changes have been introduced into a corn harvester. Measures have been carried out aimed at raising the reliability

of hydraulic systems, harvesters for the mowing of grasses and pick-up attachments and the working conditions of machine operators have been improved. The series production of the design developed for this self-propelled combine has been in progress since March of this year. The acceptance of the finished product will be carried out by Gosstandart /State Committee on Standards of the USSR Council of Ministers/, the organization of production is being improved and material incentive measures are being employed: the workers receive 40 percent of their earnings based upon the quality of the output. All of this will make it possible to eliminate technological shortcomings and to ensure the carrying out of the technical conditions required for this machine.

A substantial shortcoming of the serially produced combine is the irregular distribution of its weight and the raised workload on the right wheels of the machine. In the new design that has been developed, models of which were made available to machine testing stations for the carrying out of extensive production checks, the configuration of the units was changed and this now ensures a uniform workload for the wheels. The design and position of the cabin provide the machine operator with a good view of the technological process. Overall, these and other design solutions serve to raise the productivity of the combine by 30 percent compared to the potential of the KSK-100. During the first 6 months of next year, the plans call for the series production of the new Sozh combine to commence.

The designers are presently developing the more powerful Polesye combine, which will have a productivity of up to 200 tons of fodder per hour. Its design employs a hydraulic drive for a portion of the working organs. A new multi-purpose milling unit has been developed jointly with the Fordshtrit enterprise (GDR) and it is used for milling traditional forage crops and for crushing ears of corn. The machines have metal detectors for trapping foreign metal objects and the cabin of the machine's operator is equipped with automatic equipment and control-measurement instruments for monitoring the work process. It is expected that the production of these feed harvesting combines, which are in no way inferior to the best foreign models, will commence in 1989 and that their series production will be mastered in 1990.

In addition to improvements in and the development of new designs for combines, organizational-technical measures are being carried out aimed at raising technological discipline and increasing technical control. The more important work positions at the enterprises are manned by skilled workers and experts. All of this is serving to ensure radical improvements in the quality and reliability of the feed harvesting combines being produced.

Measures have been undertaken to improve the servicing of combines while in operation. Support points for the guaranteed servicing of machines have been organized and are in operation and a spare parts reserve fund has been formed in 105 krais and oblasts. More than 10,000 machine operators have been trained to operate machines. Special detachments for the group utilization of feed harvesting equipment are being created in a number of oblasts and republics. The concentration of equipment in such detachments is raising labor productivity by a factor of 1.5-1.8 and it is lowering operational expenses by 20 percent. The enterprises of Minzhivmash are furnishing practical assistance in organizing the centralized use of feed harvesting equipment.

The production structure has been examined and the spare parts nomenclature for feed harvesting equipment has been increased. By agreement with USSR Gosagroprom, an order for the production of an additional quantity of needed spare parts has been carried out for 40 types of spare parts. The measures undertaken allow us to state that the quality of the feed harvesting equipment and their reliability will conform to the technical conditions.

Hay occupies a special place in the feed ration for cattle. The production level achieved for hay is not satisfying completely the animal husbandry requirements. The prolonged harvest periods result in a considerable portion of the feed procured being of low quality. The main reason for this lies in the fact that large quantities of hay are procured using an obsolete technology and the volumes for the production of machines and equipment for the intensive technologies for obtaining feed, particularly the procurement of hay in pressed form, are inadequate. In 1985, the procurements of pressed hay amounted to one fourth of the overall volume. The branch is producing PS-1.6 and PRP-1.6 pick-up balers, the pool of which increased prior to the start of the 12th Five-Year Plan.

With a seasonal productivity of 300 tons of hay for a unit (and the technical potential of the unit is considerably greater), the procurement of feed in pressed form could amount to 45 million tons for the country as a whole. One reason for the low use of the potential of this equipment -- the absence of a technical solution for picking up and loading the bales. The production of a modernized PS-1.6 pick-up baler, with a unit for delivering the bales to transport vehicles, will commence this year. Compared to the traditional drying of grasses in the field, nutrient losses can be reduced by a factor of 1.5-2 through the use of agitators and forced ventilation. During the years of the five-year plan, the production of forced ventilation units will increase by a factor of 2.3. The series production of rotary machines for the tedding of mown grasses began this year.

A great amount of attention has been given to the creation of equipment for feed preparation shops. For the purpose of reducing feed consumption and preparing balanced rations, a set of equipment for the KORK-15 feed preparation shop, in which lines for pulp residue and for the heating of feed mixtures are being introduced, is undergoing substantial modernization.

For small farms having up to 400 head of cattle and up to 1,000 head undergoing a fattening regime, a set of equipment for a feed preparation shop is being created for the preparation of loose feed mixtures. It will have a productivity of 5-6 tons per hour. Work has been completed on the development of KU-2 and KU-4 sets of equipment for the preparation of pressed feed mixtures. They will have a productivity of 2 and 4 tons per hour based upon alkali treated straw.

The development of equipment for processing forage grain for feed purposes will undergo further development. During the 1986-1987 period, work will be completed on the development of a miniature mixed feed unit, with a productivity of 2 tons per hour, for the preparation of a grain mixture, the use of which will make it possible to raise the quality of grain forage and to realize a considerable savings in its use. Preparations are being made for the

production of the IRM-50 feed mincer for the grain of ears of corn of a raised moisture content. It will have a productivity of 25-30 tons per hour.

Further growth in the level of complete mechanization at animal husbandry farms, as revealed by analysis, is being held up by a shortage of feed distribution equipment and by a lack of mechanisms required for carrying out auxiliary operations. Extensive use will be made of the KTU-10A feed distributor during the 12th Five-Year Plan. Over the five-year period, the supplying of hay will be greatly improved through the use of these distributors.

Two thirds of the pool of milking units consists of units which involve the collection of milk in milk pails, with 8 percent being obtained by means of the highly productive Tandem and Yelochka milking units. As a result and despite a relatively high level of mechanized milking operations, substantial changes are not being introduced in the organization of labor for workers on animal husbandry farms. The work of livestock breeders is becoming easier and yet productivity is increasing only slowly and labor expenditures for a quintal of milk remain high. During the 12th Five-Year Plan, the branch, jointly with USSR Gosagroprom organizations, must carry out a number of measures aimed at expanding the use of highly productive milking units in dairy cattle husbandry.

Just as in the past, the problem of preserving the milk on the farms continues to remain acute. A new and highly effective heat-exchange unit has been developed for the purpose of solving this problem and equipment is being created for cooling milk in a flow line, with use being made of milking assemblies, milking lines and milking parlors. The production of serially produced receptacles -- RPO-2.5 and MKA-2000L-2A milk coolers will be increased by more than twofold.

Solutions are being found for the problems concerned with the mechanization of auxiliary operations at animal husbandry farms. Design organizations are attempting to develop technical equipment for the scattering of milled bedding and for cleaning up stalls.

For the future, it bears mentioning that improvements are needed in connection with the automated preparation of feed and the standardized feeding of cattle. Coincidental with the use of micro-processor equipment, other types of automated equipment are being created which will ensure proper accounting for feed expenditures and the optimization of feed rations depending upon the productivity of the animals, the fattening period and the quality of the feed.

Considerable attention must be given to creating machines and equipment for the mechanization of small farms, where the level of mechanization for feed distribution work is very low. The mobile feed distributors produced by industry are intended for distributing only milled feeds and feed mixtures prepared in feed preparation shops. The use of these mechanisms requires feed passages, which are lacking in a considerable number of the car barns. Modernization work has been carried out in this regard and the production of a small-scale RMM-F-6 feed distributor, which will be more suitable for use on small farms, is being mastered.

The branch's designers are engaged in developing a small-scale feed distributor with a loader which will make it possible to self-load milled feed from trenches or from platforms. The plans also call for the creation of a feed distributor for farms having narrow feed passages, which will be employed extensively at non-standard small farms, and also mechanized equipment for the distribution of concentrated feed, root and vegetable crops and unmilled coarse feed and also for applying bedding.

The production of an automatic stanchion for the animals has been mastered. This now makes it possible to solve the problem concerned with creating prefabricated milking parlors on small farms, equipped with the highly productive Tandem and Yelochka milking units.

For the mechanization of production processes at modernized swine farms, use is being made mainly of serially produced machines and equipment: feed preparation shops of the KTs type, KTU-3BM feed mixture loaders, KS-1.5, KES-1.7 and KSP-0.8 mobile feed distributors, TS-1 conveyer lines for removing farmyard manure, NZhN-200 and NSh-50 pumps, UTM-10 units and OSM-60 machines, the requirements for which are for the most part being satisfied. At the same time, this equipment is not very acceptable for farms having from 3,000 to 6,000 swine; it requires appropriate modernization. The branch's designers consider the solution to be that of creating multi-purpose equipment which will make it possible to modernize all farms with minimal expenditures.

At the present time, the production of sets of the multi-purpose OSM-1M machine equipment, which are embodied in the standard plans of RosNIIselstroy, is being mastered, the development of the KPS-45 feed preparation shop, which involves use of feed made from food waste scraps, has been completed and a mobile multi-purpose feed distributor is under development.

For the mechanization of small sheep raising farms, the plans call for the production of a set of equipment that provides for mechanization even at distant pastures. Using self-propelled undercarriages and transport towing equipment, machines are being created for hauling water, organizing drinking points, issuing concentrated and reserve feed and for the carrying out of sanitary and veterinary measures. The use of this equipment will make it possible to increase the number of sheep and the amount of products being obtained in the traditional sheep raising zones. For the mechanization of small farms throughout the country, a need exists for ensuring the production of 12 types of machines and equipment that have already been developed at the present time.

With the exception of incubators, the requirement for poultry raising equipment is being satisfied fully. The development of and improvements in poultry raising equipment are being carried out for the purpose of providing these operations with technical systems for the periodic standardization of feeding.

New attached feed distributors with spiral batchers will be employed in the cage equipment for poultry. They ensure dosage feeding for the poultry and they lower the material-intensiveness of cage batteries by 8-10 percent and energy consumption -- by twofold. Equipment is being developed for raising broilers in cages, with mechanized placement and unloading of them.

The production and separate deliveries, in response to farm orders, of incubation and incubator breeding chambers, involving the use of automatic control systems and based upon micro-processor equipment, have been organized. A system for removing the down used in the breeding chamber of an incubator is making it possible to improve considerably the working conditions of the operators.

A great amount of attention is being given to improving the quality of the equipment being produced and to raising the reliability of its operation. An expansion is taking place in the practice of installing sets of equipment and adjusting their operation automatically.

An increase will take place in the production of large tonnage machines for applying organic fertilizer -- PRT-10 and PRT-16, MZhT-10 and MZhT-16 following modernization. The pressure of the wheels of these machines on the soil has been lowered from 3.7 to 2 kilograms per square centimeter. The production of the highly efficient PND-250 loader will raise substantially the output of the machine pool for applying solid organic fertilizers.

Great importance is being attached to creating equipment for processing the waste materials of animal husbandry. This will make it possible to solve the tasks concerned with raising the quality of organic fertilizers, protecting the environment and obtaining renewable sources of energy.

Each year the country's animal husbandry farms and poultry factories furnish almost 2 billion tons of organic waste materials. Their processing in bioenergetic units, using the methane discharge method, makes it possible, according to data supplied by agricultural specialists, to raise the quality of the organic fertilizer by 25-30 percent, to destroy the germinative capacity of weed seed, helminths and to obtain a considerable amount of fuel. Thus a bioenergetic unit which is tested successfully on a cattle farm for 800 head produces 1,000 cubic meters of biogas daily.

An important role is also played by energy-conserving equipment used for supplying heat and for creating a microclimate in animal husbandry and poultry raising facilities.

New economic boiler-steam generators and heat generators which operate on the basis of gaseous, solid and heavy liquid fuel will be mastered during the 12th Five-Year Plan. Equipment for utilizing the heat of ventilation exhausts will serve as a large reserve for realizing savings in the use of fuel and energy resources.

An analysis of the heat balance of animal husbandry facilities reveals that more than one half of the heat generated by the animals and also the technical heat used for heating purposes is released from the facilities. For the purpose of utilizing this heat, production has commenced on a UT-F-12 heat utilizer, which operates on the basis of heating pipes. The effectiveness of this heat utilizer is 44 percent, which is equivalent to a savings of 93,000 kilowatt-hours per unit. Tests have been carried out on a new RU-F-12 high circulation disk heat utilizer for poultry raising facilities, the effectiveness of which is 58-60 percent and the energy savings per unit -- 176,000 kilowatt hours annually.

The full scale production of heat utilizers will commence in 1988 and, according to estimates, the requirements of the rural areas for them will have been satisfied to a considerable degree by 1990.

* * *

The document entitled "System of Machines for the Complete Mechanization of Agricultural Production During the 1981-1990 Period," which has been further refined for the 12th Five-Year Plan, serves as an important organizational document for ensuring a single technical policy for the mechanization and electrification of agricultural production. Special purpose all-round programs have been developed for its planned implementation throughout the branch and the executive agents have been defined -- associations, enterprises and design organizations. Specific periods and schedules have been established for carrying out all stages of the work, from scientific research and the creation of designs to the technological preparations for producing the first industrial series and the series mastering of the machines and equipment.

A standardization program has been approved for the principal groups of machines and equipment and this will make it possible to interest other ministries and departments in solving the tasks concerned with the creation and production of high quality equipment.

In order to raise the quality of the developmental work, a considerable increase will take place in the use of automatic planning equipment. The plans call for the construction and technical re-equipping of experimental departments and laboratories of institutes, design organizations and enterprises. The branch is allocating more than 8 percent of its capital investments for this purpose, or more by a factor of three than the amount used during the past five-year plan.

The experience accumulated by the Riga GSKB [state special design office] in the use of modular-unit planning for machines and equipment is being disseminated; 30 percent of the feed harvesting equipment and 35 percent of the milking units being produced will be equipped with electronic control equipment. These and other measures will make it possible, by 1990, to lower the specific energy-intensiveness of the machines being produced by 7-12 percent and metal-intensiveness -- by 18 percent.

Solutions for the problems of quality and equipment reliability are unthinkable unless progressive technologies are introduced for raising the durability of parts and units, for improving the methods for developing mechanisms and structures, for making extensive use of rapid methods for testing machines on stands and at proving grounds and for converting over to the modular principle for creating them.

Units which are not only metal-intensive and cumbersome but also have a low reliability must be rejected outright or their use limited in structures.

A radical change must take place in the attitude towards the introduction of hydraulic drives, hydromechanical, electromagnetic and other units, diverse fluctuation dampeners, protective units, self-lubricating, self-sharpening parts and other progressive solutions.

A customer is quite justified in expecting the equipment called for in the System of Machines to be delivered on a rapid basis, to be of high quality and to be supplied in the required volumes.

Towards this end, work is being carried out aimed at accelerating the creation of highly mechanized and automated production operations, achieving more thorough development of specialization, expanding cooperation and at all enterprises taking advantage of the new conditions for management and structural policy and, most important, for the immediate introduction of new and progressive technical solutions.

Serious work must be carried out during the 12th Five-Year Plan in connection with the technical re-equipping and modernization of small enterprises. Their technical levels and working conditions must conform to the modern requirements for highly efficient production operations. The plans call for specialization to be carried out at enterprises engaged in the production of machines used for mechanizing operations at small and medium animal husbandry farms.

The role played by the branch's institutes for standardization, unification and specialization in intensifying production specialization, concentration and cooperation will be raised substantially. The status of affairs requires a high quality reorganization of the work concerned with unification and standardization and an examination of some of the traditional methods employed in design work, in technological training and in organizing the production of machines. Based upon maximum unification of units and parts and using new equipment and technology, the plans call for the level of specialization to be raised to 40 percent. This will make it possible to lower the production costs for the goods being produced by 12 percent and to raise labor productivity by 24 percent.

Taking into account the increasing requirements for raising the technical level for production and the equipment being produced and the mastering of the new types of equipment, the production of instruments and technological equipment will be increased by a factor of 5.5.

Special attention will be given to the production of equipment for resource-conserving technologies, mechanized and automated storehouse complexes, equipment for applying protective and paint and varnish coverings, packaging and baling materials and container shipments, stamping equipment, press-forms for castings under pressure and other instruments.

The branch's enterprises have converted over to the new conditions for management. The most important tasks today are those concerned with uncovering, summarizing and utilizing the positive experience of enterprises with regard to improving planning, strengthening cost accounting procedures, intensifying the effect of the economic mechanism in accelerating scientific-technical progress, utilizing all types of resources in an efficient manner and increasing the effect of economic levers and stimuli in the interest of achieving high final results.

The solutions for important long-range problems and current tasks require a maximum mobilization of the creative efforts of labor collectives, purposeful

work aimed at carrying out socialist obligations and planned tasks, the efficient use of production potential and further strengthening of labor and technological discipline, organization and order.

In the branch's labor collectives: in associations, scientific-research and design organizations and in the Ministry of Machine Building for Animal Husbandry and Feed Production, specific measures are being carried out in connection with production reorganization and the style and methods of administration. These measures are aimed at achieving unconditional fulfillment of the tasks assigned during the 12th CPSU Congress.

Measures are being undertaken at enterprises aimed at improving production-economic activities and developing the important problems concerned with accelerating scientific-technical progress in light of the decisions handed down during the June (1986) Plenum of the CPSU Central Committee.

Planned and purposeful work in implementing the party's directives and the historic decisions of the 27th CPSU Congress is being carried out in all elements and at all administrative levels throughout the branch. The scale and scope of the assigned tasks are imposing special requirements upon the personnel, methods and managerial practice. Under the new conditions, a need exists for radically changing the attitude towards the work and for achieving maximum efficiency, strict discipline and a high level of organization.

In carrying out their practical work, the ministry's board, the party committee and the leadership of associations, enterprises and research and design organizations are organizing the work in a manner such that the labor collectives are characterized by a truly creative atmosphere, a healthy moral-psychological climate and intolerance of those who carry out instructions and circular letters in a thoughtless manner and workers who do not wish to reject obsolete forms and methods for administering production-economic activities.

The labor collectives of enterprises and organizations of the machine building branch for animal husbandry and feed production understand the scale of the assigned tasks and are fully resolved to carry them out.

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LIVESTOCK AND FEED PROCUREMENT

BELORUSSIAN FEED PROCUREMENT PROGRESS REVIEWED

BSSR Gosagroprom

Minsk SELSKAYA GAZETA in Russian 3 Oct 86 p 1

[Article under the "Sufficiency of Feed" rubric: "Not to Reduce the Pace of Fodder Procurement: Operational Review of Belorussian SSR Gosagroprom"]

[Text] At the beginning of October for the republic as a whole, the plan for the procurement of feed in terms of feed units without feed grains was 82 percent fulfilled. Procurement per standard head of public livestock (excluding pigs and poultry) was 11.9 quintals of feed units. That is a relatively good result. It should be noted, however, that not a single oblast in the republic took decisive measures to meet the assigned schedules for the procurement of hay and fodder. Only the farms of Brest Oblast are meeting the schedule for the accumulation of haylage. In 44 rayons, the plan for the procurement of hay was less than 80 percent fulfilled. There is a large relative share of such rayons in Minsk, Mogilev and Gomel oblasts.

One is not aware of an appreciable increase in the procurement of haylage either, even though it is possible under existing conditions to manipulate technologies to procure it.

The work is more successful in the accumulation of silage, where every oblast is meeting the schedule. A number of places, however, are not taking effective measures in the preparation of combined silage. Particularly large lags in the procurement of this feed occurred in Brest and Mogilev oblasts. The feed base is still very weak in Beshenkovichskiy, Dyatlovskiy, Iyevskiy, Lidskiy, Novogrudskiy and Klichevskiy rayons, which procured fewer than 10 quintals of feed units per standard head of public livestock (excluding pigs and poultry).

Another matter of particular concern is the fact that so far not a single oblast has fulfilled the plan for the sale of herbal meal to the state, whereas there is output for sale everywhere.

In considering the existing situation, the attention of farm specialists and managers must now be directed mainly to the maximum replenishment of feed supplies. Every farm has resources for this. They include aftermath grasses,

catch crops, etc. It is essential to make full use of existing reserves and not to diminish the pace of the work in the procurement of fall fodder.

The potato harvest was not bad this year. It is therefore essential to take comprehensive measures without delay for the accumulation of mixed silage and to ensure the fulfillment of the assigned tasks. There are also possibilities for the activation of the work to fill tower storehouses.

In short, the fall fields are still providing good possibilities for a substantial strengthening of the feed base. The task of the day is to make maximum use of these possibilities on each farm.

Information on the Course of the Procurement of Feed on the Kolkhozes, Sovkhozes and Intercollective Farms of the Belorussian SSR as of 29 September 1986

	Oblasts					
	Brest	Vitebsk	Gomel	Grodno	Minsk	Mogilev
Procured feed (percent of the schedule)						
--Hay	87	93	88	97	95	96
--Haylage	104	99	87	83	95	96
--Silage	123	101	119	171	106	106
Herbal meal sold (percent of the plan)	72	64	79	85	96	77
Herbal meal still to be sold to fulfill the plan (tons)	7,198	9,021	6,000	3,404	1,335	4,636
Procured feed (excluding grain and potatoes) for public livestock (quintals of feed units per standard head)						
--in 1985	11.8	11.0	12.9	11.1	12.0	11.6
--in 1986	12.2	12.1	11.6	11.4	12.0	12.1

Insufficiencies Noted

Minsk SELSKAYA GAZETA in Russian 12 Oct 86 p 1

[Unattributed article: "Sufficient Feed to the Farms"; first two paragraphs are SELSKAYA GAZETA introduction]

[Text] The republic's kolkhozes and sovkhozes procured 14.5 quintals of feed units per standard head of livestock, including 16 in Brest Oblast, 13.8 in Vitebsk Oblast, 12.3 in Gomel Oblast, 16.8 in Grodno Oblast, 14.9 in Minsk Oblast and 13.5 in Mogilev Oblast. This is clearly insufficient for a normal

wintering. Each farm must procure no fewer than 18 quintals per standard head of the public herd for the period when the animals are kept in stalls.

There are still possibilities for doing this. For the procurement of grass fodder, it is essential to make maximum use of aftermath and perennial grasses of the spring undersowing as well as catch crops.

--Everything possible must be done to replenish the supplies of hay and, for this purpose, to utilize active ventilation with heating, pile-drying points in the fields, and analog computer units for the preparation of the grass cutting.

--There are possibilities for increasing the amount of haylage procured. This work must be activated above all on the farms of Grodno, Gomel and Minsk oblasts that did not fulfill the plan for the procurement of this feed.

--The procurement of mixed silage is proceeding extremely slowly, especially on the farms of Brest Oblast, even though there is raw material for these purposes everywhere.

--There is a large lag in the sale of herbal meal to the state in Vitebsk, Brest and Mogilev oblasts, where the plans were less than 80 percent fulfilled. One must not forget that the production of high-grade concentrates in the planned volumes is possible only under the condition that all farms fulfill the plans for the sale of herbal meal.

--The work in filling tower storehouses must not cease. It is essential to put the haylage now being procured precisely in towers. At the same time, one can utilize other raw material resources, thereby observing the required technology. This work is still being carried on slowly on the farms of Lyakhovichskiy, Rossonskiy, Ushachskiy, Shumilinskiy and several other rayons.

--It is necessary to show special care in providing for the effective utilization of the farm's own feed grain through its processing and the production of concentrates and mashes. For this purpose, it is necessary to use all available kolkhoz, sovkhoz and intercooperative concentrates shops of the OKTs and other equipment at full capacity.

The fall makes feed procurers hurry and makes it possible to increase substantially the supplies of fodder through the use of the tops of root crops, the reploting of potato plants, horticultural wastes, etc. Therefore, the concern about ensuring a satisfying wintering for livestock must be a matter of special importance for all farm managers and specialists. Everything that the fall fields provide must be fully utilized for the replenishment of the feed base. To a considerable extent, the productivity of the animal husbandry sector in the winter stabling period of the keeping of livestock will depend precisely upon the strength of this feed base.

Minsk SELSKAYA GAZETA in Russian 20 Oct 86 p 2

[Unattributed article and commentary: "Facing the Winter Examination"; first paragraph is SELSKAYA GAZETA introduction]

[Excerpt] A crucial period has begun for livestock specialists: the keeping of livestock in stalls has started. Many kolkhozes and sovkhoses have established a dependable supply of feed, repaired premises and equipment, and shown concern about good working conditions for livestock specialists. There are, however, unforgivable errors. Along with specialists, BELTA [Belorussian SSR Telegraph Agency] correspondents consider ways to correct them most quickly.

Time to Mend Holes

The farms of Oktyabrskiy Rayon are beginning the winter season with smaller feed reserves compared with last year. Among the main reasons for the incomplete harvest named by RAPO [rayon agroindustrial association] specialists are drought and the increase in the number of animals through the cattle brought in from southern rayons of Gomel Oblast.

These facts are certainly objective. But are they the only reasons? Unfortunately, many farm managers, complaining about the unfavorable situation, let the procurement of feed take care of itself during the summer. The lack of organization and failures in the work of the sequence of the pasture crops led to an incomplete harvest of grasses. Pravda Sovkhoz and the kolkhozes imeni Bumazhkov and 1 May, for example, procured 3 or 4 quintals of feed units per standard head less than the rayon average. Can this situation be attributed to the drought if neighboring farms were able to manage? At Voskhod Kolkhoz, where the lands are no richer than elsewhere and no more rain fell, they are facing the winter with confidence.

Unfortunately, there are few such examples in Oktyabrskiy Rayon. That is why it is now urgently necessary to mend some holes.

"The feed situation is not simple," agrees deputy RAPO chairman V. Bondarenko. "We are searching for any possibility to accumulate feed reserves. Potatoes supplemented the feed balance noticeably. Their yield was 20 to 30 quintals above the plan. That means that there is a resource base for increasing the volumes of mixed silage. At this time, however, only the kolkhozes imeni Lenin and imeni Gorkiy have steamers working at full capacity, where, in addition to tubers, they are using carrots, herbal meal and the wastes of feed grains. At other farms, mixed feed is still not in high esteem, and there are insufficient capacities for its storage."

Understanding the complexity of the situation, the rayagroprom worked out measures to help farms with weak feed bases. Several thousand tons of root crops were purchased for them in the Ukraine and 2,600 tons of straw will be brought in from Minsk Oblast. Additional outlays will have to be made to prevent a feed shortage.

BELTA Commentary

The republic's livestock specialists have entered this winter period having significantly increased the production of milk and meat since the beginning of the year. But it will not be easy to consolidate what has been achieved. The one reason for this is the uneven supplying of farms with feed. The situation is especially difficult in Gomel Oblast, where they procured 1.3 quintals of feed units per standard head less than the past summer. Grodno Oblast exceeds last year's indicator by only 0.4 quintals of feed units, Minsk Oblast by 0.55, Mogilev Oblast by 1.0, and Vitebsk and Brest oblasts by 3.1 and 3.2 quintals, respectively. Petrikovskiy, Mozyrskiy, Dyatlovskiy, Slonimskiy, Dzerzhinskiy, Chervenskiy, Klichevskiy, Krasnopol'skiy, Gorodokskiy, Chashnikskiy and several other oblasts lagged behind significantly.

During these fine days, the feed procurers still have the possibility of adding to the feed stocks. One of the reserves is the replowing of potato plantings. The experience of Vitebsk Oblast shows that it is possible to harvest an additional 50 to 60 quintals of tubers per hectare.

And a third cutting of grasses, catch crops, beet tops and other wastes of agricultural output! They can also be utilized.

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TILLING, CROPPING TECHNOLOGY

CROPPING TECHNOLOGY DEVELOPMENT IN TATAR ASSR

Recent Achievements

Saratov STEPNYYE PROSTORY in Russian No 12, Dec 85 pp 2-4

[Article by M. A. Sirayev, Minister of Agriculture of the Tatar ASSR and member of the journal's editorial board: "Towards New Labor Achievements"; first paragraph is source introduction]

[Excerpts] To consistently strengthen the material-technical base of the agro-industrial complex, to achieve a harmonic development of its branches after having concentrated resources on the most important directions of scientific-technical progress, to eliminate problem areas throughout the entire technological cycle from production output to the sale of the product to the consumer, to significantly increase the effectiveness of utilizing the resources that are earmarked for the agro-industrial complex.

--Basic Directions of Economic and Social Development of the USSR in 1986-1990 and in the Period to the Year 2000.

This is the final month of the final year of the 11th Five-Year Plan. Our republic's agricultural workers are working successfully to carry out the decisions of the 26th Party Congress and of the April and October 1985 Plenums of the CPSU Central Committee. During the past five-year plan extensive work has been completed in the area of implementing the Food Program and of the development of the agro-industrial complex. There has been a noticeable strengthening of the material-technical base, the energy supply to kolkhozes and sovkhoses has increased and intensive and industrial technologies are being introduced.

The subdivisions of Tatselkhozkhimiya [Tatar Agricultural Chemical Association] have activated their operations. They are making a significant contribution toward improving the fertility of fields. In recent years the volume of complex agrochemical soil cultivation has doubled. This important measure has been carried out today on 150,000 hectares. The liming of acidic soils is being carried out on large areas. A program dealing with the transition to a 5-year cycle of liming acidic soil has been developed and is being implemented on no fewer than 250,000 hectares annually.

As a result, the average annual volume of gross agricultural production output in the public sector increased by 7 percent during 4 years of the current

five-year plan as compared to the 10th Five-Year Plan. Whereas in 1981-1982 average grain productivity comprised 13.5 quintals per hectare, during the next 2 years it increased to an average of 16.3 quintals, and in 1985--to 18.1 quintals, which enabled farmers to honorably carry out their obligation to the fatherland. The state's granaries have received 1,550,000 tons of quality grain; all enterprises have supplied themselves with the full quantity of seed needed for next year's harvest.

The enterprises of Arskiy, Baltasinskiy, Kukmorskiy, Rybno-Slobodskiy, Vysokogorskiy, Zelenodolskiy, Pestrechinskiy, Laishevskiy, Mamadyshskiy, Sabinskiy and Verkhneuslonskiy rayons have completed their five-year plans for grain procurement. Twenty six rayons have dealt successfully with annual plans for the sale of grain to the state. The farmers of Arskiy Rayon, who stockpiled the largest quantity of grain into state granaries--92,000 tons--have fulfilled the annual plan for grain procurement by 178 percent. They won first place in republic socialist competition to increase grain production and procurement in 1985. Also awarded first place were the grain farmers of Baltasinskiy and Tukayevskiy rayons, who fulfilled plans for the sale of grain to the state by 161 and 111 percent respectively and who harvested 23.2-24.7 quintals of grain per hectare.

In mobilizing farmers for the successful implementation of this year's harvest operations, agro-industrial enterprises have demonstrated constant concern regarding laying a dependable foundation for the following year's harvest. Kolkhozes and sovkhoses completed the sowing of winter crops on an area of 735,000 hectares in good agricultural time; of this area 395,000 hectares were sown according to intensive technology. Late-fall plowed fields were plowed in an organized manner and the necessary quantity of high-quality seed was stockpiled.

Agricultural workers are faced with very responsible tasks today. First and foremost they must complete the shipment of mangel-wurzel to processing enterprises as quickly and as well as possible, to begin the extensive repair of machinery and to organize the mass training of cadres.

The successful development of livestock raising and growth in farm production output are integrally tied to the feed base. The work results of feed procurers are generally adequate this year. A total of 18 quintals of coarse and succulent feeds has been stockpiled for wintering of a standard head of cattle. However, we are forced to note great variety in the stockpiles of feed in enterprises, which speaks of unused reserves. In order to successfully develop livestock raising and fulfill plans dealing with farm production output the republic must annually produce no fewer than 5.8 million tons of feed units with a content of 600,000 tons of digestible protein and feed sugar. For this it is necessary to improve the effectiveness of the branch, to produce no fewer than 35-40 quintals of feed units per hectare on dry-farming land and 65-70 quintals on irrigated land, and to bring productivity of grain forage crops to 23-25 quintals per hectare.

There is no doubt that kolkhoz farmers, workers and all agricultural workers in the republic, in responding to the decisions of the October 1985 Plenum of the CPSU Central Committee, will make every effort to successfully complete

the year, and will do everything necessary to complete with honor all plans and obligations related to the production and procurement of all types of agricultural and animal products and to worthily greet the 27th CPSU Congress.

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Potential of New Technology Cited

Moscow SELSKOYE KHOZYAYSTVO ROSSII in Russian No 1, Jan 86 pp 28-30

[Article by M. Shaymiyev, Chairman of the Tatar ASSR Council of Ministers: "The Quality of Farming and the Harvest"]

[Excerpts] The Tatar ASSR's agro-industrial complex can be characterized by a powerful production potential. Fixed capital of kolkhozes, sovkhozes, enterprises and organizations which service agriculture comprises about 5 billion rubles.

Since the May 1982 Plenum of the CPSU Central Committee the economy of enterprises has been strengthened significantly. Almost all enterprises have become profitable. During the final year of the 11th Five-Year Plan field and farm workers generated about 200 million rubles in profits; moreover, about 70 million were the result of improved production effectiveness. Production profitability equalled 15 percent. The fatherland's granaries received 1,550,000 tons of grain. Plans for the procurement of meat and vegetables have been successfully fulfilled. Tens of thousands of tons of mangel-wurzel and milk and 20 million eggs have been sold to the state above the quota.

Having the identical resources at its disposal, the republic has been able to achieve a 20 percent increase in the average annual growth of gross production output during the last 3 years. Land is being used better and livestock productivity has increased.

During the past five-year plan productivity of grains increased by 1.6 quintals, of mangel-wurzel--by 14 quintals and of vegetables--by 56 quintals. An especially great deal has been done to improve the productivity of feed crops. Each hectare has yielded 26.3 quintals of feed units as compared to 20.3 quintals last year. This occurred despite the extremely unfavorable weather conditions of 1981.

Quite recently our best enterprises were producing 20-25 quintals of grain, and now this result has been achieved by 10 rayons and by over one-third of all enterprises in the republic. Purposeful work to improve farming quality turned out to be particularly fruitful in the northern part of the Tatar ASSR with its soddy-podzolic and light grey forest soils. Within a short period of time the enterprises there increased the productivity of a hectare of grain by 5-8 quintals and now harvest an average of 20-23 quintals of grain per hectare.

Each of almost 100,000 hectares in Arskiy Rayon of this zone yielded 21.5 quintals. Local enterprises sold the state 92,000 tons of grain.

Within farming systems special attention is being given to improving the

structure of sowing areas and to crop rotations which have been introduced on an area of almost 3,500,000 hectares, comprising 92.5 percent of total plowland.

The structure of sowing area is now close to the assigned parameters. Grains occupy 56.5 percent of plowland, feeds--28, industrial crops, potatoes and vegetables--3.7 and clean fallow, on which two-thirds of winter crops are sown--11.8 percent. During the past five-year plan the productivity of these winter crops was 5-8 quintals higher than of winter crops sown on occupied fallows. Clean fallow is one of the basic elements in the farming system; it is a guarantee of the restoration of soil fertility, of the accumulation in soil of nutritional substances and moisture and of an effective struggle against weeds.

Upon the initiative of the republic's agrochemical service, work is being carried out on the comprehensive cultivation of fields (KAKhOP [Comprehensive Agrochemical Field Cultivation]) and first and foremost--of clean fallow. The volume of KAKhOP is growing constantly. Whereas in 1980, 25,000 hectares were subject to comprehensive cultivation, last year this was true of 130,000 hectares. Growth in the rye harvest there comprised about 7 quintals per hectare, and in some enterprises--10 and more.

In the Tatar ASSR 1.5 million hectares are acidic. In previous years 60,000-70,000 hectares were limed; now 200,000 hectares undergo this treatment, and in the near future the area undergoing this type of treatment will increase to 300,000 hectares.

We are assimilating the year-round mining of liming materials. In order to make a transition to a five-year cycle of liming further development of the quarry enterprise, which is still being hindered because of the shortage of equipment--excavators and crushers, is needed. There is also a shortage of transportation means and of equipment for applying lime.

In the republic a program has been developed for the chemicalization of agriculture in 1986-1990 and for the scientifically-based use of all chemical agents with a consideration of plant requirements and soil condition. Systematic soil studies are being carried out by stations of agricultural chemicalization and by the Kazan affiliate of VNIPTIKhIM [All Union Scientific Planning and Technical Institute of the Chemical Industry], which supplies kolkhozes and sovkhoses with cartograms and design documentation.

The local application of mineral fertilizer has become widespread in the Tatar ASSR and has resulted in an increase of 2-3 quintals per hectare in yield as compared with the spreading method. Fertilizer is placed in rows on 85 percent of the area in spring grains and on 75 percent of the area in winter crops.

A new method of seed treatment--incrustation--is also being utilized. For the 1985 harvest specialized detachments of Tatselkhozkhimiye incrustated one-third of the seed material.

The republic's land is extremely varied. Chernozems make up 34.5 percent of arable land, grey forest-steppe soils--33 percent, and the remainder of the area is represented primarily by soddy-podzolic soils. Hundreds of thousands of hectares of plowland have been subjected to various forms of erosion. This was the basis for a differential approach during the development of systems of soil cultivation in each kolkhoz and sovkhoz. The optimal coordination of terracer, non-terracer, deep and surface cultivation is implemented depending on the type of soil, its erosion condition, weed infestation and a consideration of the needs of the crop being cultivated within crop rotations.

Deep cultivation is utilized only for fallow-occupying crops, root and tuber crops, corn and perennial grasses; shallow (to a depth of 12-14 centimeters) or surface (6-8) cultivation is utilized for winter crops sown on occupied fallows.

In the tests carried out by the Tatar NII of Agriculture since 1975, sweep cultivation contributed to an increase in yield of 1.5-2.9 quintals per hectare during dry years. Tests and practical experience show that in the Kama and Volga regions on gray forest and soddy-podzolic soils which have a tendency to become muddy, plowing must alternate with cultivation every 2-3 years; on chernozems--every 3-4 years.

During the years of assimilation of scientifically-based systems of farming in the republic, the annual volume of non-terracer and sweep cultivation of fall-plowed fields and fallow has comprised 1,300,000-1,500,000 hectares or 45-60 percent of the total land area.

In order to successfully introduce the new system of soil cultivation we turned to industrial enterprises with a request that they manufacture Maltsevsk plow standards and plow bases for non-terracer cultivation. During the last five-year plan 40,000 standards have been manufactured by the supervisors of kolkhozes and sovkhozes.

BlG-3, BMSCh and BSO harrows in a unit with broad SG-21 trailers are widely used for surface cultivation.

A successful battle against soil erosion is possible only on the basis of the implementation of a complex of agrotechnical, forest reclamation and hydraulic engineering operations. This is attested to, for example, by the experience of Chulpan Kolkhoz of Vysokogroskiy Rayon, where 90 hectares of forest-protection belts have been sown during the last 7 years, where a counter-erosion pond and water-retaining embankments with a total length of 4,000 linear meters, an embankment with a water run-off structure and 70 basket-weave connectors have been built, where the flushing of ravines has been carried out and where a complex of counter-erosion measures has been instituted on 100 hectares of sloping lands. Today 30-50 quintals of perennial grass hay is harvested from ravines and gullies; the increase in yield of winter rye has comprised 4.5 quintals, and of corn for silage--156 quintals.

The improvement of seed farming and the introduction of new, highly productive varieties are considered to be important factors in the intensification of

farming. The proportion of crops consisting of regionalized varieties equalled 93 percent in the republic in 1985, and of the highest reproduction-- 79 percent. During the last 5 years kolkhozes and sovkhozes have received from the Tatar ASSR OPKh [Experimental Model Farm] almost 420,000 quintals of elite seed, or 37 percent more than the quota, for the renewal of and substitution for varieties.

For the purpose of the accelerated introduction into production of new, highly productive varieties, seed reproduction is being carried out simultaneously with variety-testing on plots by several of our enterprises which have established direct ties with breeding institutions. As a result, intensive varieties make up 70 percent of grain crops this year. Consequently, about 200,000 tons of additional grain have been produced.

Last year our enterprises produced about 450,000 tons of additional grain on fields which are cultivated according to intensive technology.

In kolkhozes, sovkhozes and Selkhoztekhnika [Agricultural Equipment Association] enterprises, 1,352 sowing units, 979 sprayers and 818 spreaders for mineral fertilizers have been reequipped for track work. The most fertile lands have been allocated for intensive technology. Agrochemical and phytosanitary passports and technological maps have been developed for each field.

Mineral fertilizers, herbicides, fungicides, retardants and the necessary technology are being allocated according to scientifically-based norms. Basically, all areas are sown with intensive varieties. Spring wheat seed is examined for growth vitality. The top-dressing of grains is carried out on the basis of tissue diagnostics.

A new direction in the development of feed production is the cultivation of feed mixtures from sunflowers, vetch, peas and oats. In digestible protein they surpass our traditional silage crop--corn, achieve a protein balance in rations and conserve on concentrates. In 1985 feed mixtures were cultivated on an area of 130,000 hectares.

In order to improve the effectiveness of new farming systems in 1986 and to achieve continued growth in the productivity of all crops, fields have been plowed in a timely manner and with high quality (primarily by means of soil-protecting and moisture-preserving methods) and good-quality seed of regionalized varieties has been stockpiled. Organic fertilizers are being applied on schedule and the repair of equipment and training of cadres has been started everywhere. In other words, a dependable foundation has been laid for fulfilling socialist obligations during the first year of the 12th Five-Year Plan.

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ELECTRIC POWER GENERATION

MILLION KILOWATT TURBOGENERATOR TESTED SUCCESSFULLY

Leningrad LENINGRADSKAYA PRAVDA in Russian 25 Oct 86 p 1

[Article by S. Pochin: "It Passed the Test: Yesterday the Elektrosila Association Successfully Tested a One Million Kilowatt Turbogenerator"]

[Text] The most recent figures in the test journal appeared early in the morning, when it was still dark outside the windows of the test stand building. The figures showed the rotor's dampened speed. It really seemed that the machine would soon again come to life, and once again its humming voice would be heard, but this was all in the past - the increased speed, exceeding the planned 1,500 revolutions per minute, and the high voltage, the vibration and other misfortunes. None of these things could exasperate the builders of the first million kilowatt turbogenerator for the Rostovskaya AES [Nuclear Power Plant], and perhaps that is why the impression was formed that this was not a test in progress, but normal work under the usual conditions in a power plant.

These circumstances were also noticed by one of the testing personnel, who remarked: "This time none of the bosses was seen here. So work has become normal."

Truly, building "millionaires" for nuclear power plants is nothing unusual for the Elektrosila workers. Even in the plans for the turbogenerator shop for completing the next order time is now normally allocated, with no need for any "fat" and with no allowance for novelties. And every time the deadlines are cut shorter. This is no accident, according to N. N. Arsenev, the shop chief for the millionaire generator shop:

"This is no easy task, and demands the utmost effort from the personnel."

I ask the usual question in such circumstances. To what do you attribute your success? To Whom? Who did well? But Nikolay Nikolayevich tries not to limit the conversation to the topic of completing the most difficult order and keeps emphasizing that as work was in progress on the millionaire, there were no machine stoppages allowed, and even delivery of spare parts was 100 percent complete. And directing the conversation in such a way was quite typical and bears witness to today's events in the work of the largest electric power

engineering shop. There are no orders here which are more or less important -- each must receive maximum individual attention.

The senior master of the coiling section, V. G. Muravyev noted this: "What do you find if you try to stick to a method, to do "storm" work? We here don't work on the "Hey, let's go!" principle. All work is carefully planned, and the interaction of each assigned person is orchestrated.

Vasiliy Grigoryevich showed me a schedule which they had established for the month before the coiling for the millionaire were completed. All the work was scheduled day by day, shift by shift. The last task -- putting a primer coat of paint on the metal and handover to the Technical Control Department [OTK] -- took place exactly when it was supposed to. Other orders were fulfilled by the senior master in a similar fashion, such as the repairs to the stator of the Ryazanskaya GRES. And the end result was also the same. It called for the stator to be completed on the 24th, and on the 24th it was completed!

"And who worked in an outstanding manner?" I asked V. G. Myravyev the traditional question.

"Who was outstanding, who was outstanding... They all were! There was a system to our work, and therefore nobody could allow himself to weaken, nobody could afford to work less well than the next person."

The task of examining the generator after completion of the test and preparing it for shipment was entrusted to a young crew member, Sergey Aleksandrovich, and his comrades. Sergey admits that although this millionaire is not his first, and he was not required to come to work early, he was nonetheless eager to find out how it had performed on the stand, and whether everything was successful. The fitter who was with the test personnel was Viktor Lavrentyev, and he said, "It is working, it can now be analyzed!"

Understandably, the crew was in a great mood. They quickly removed the traverse, lifted the upper cover of the stator and then disconnected the seal. It was completed a day before the deadline. Today the new fitters will also be working -- they have a subbotnik [payless work day] in honor of the birthday of the Komsomol.

Alongside the tested generator for the Rostovskaya AES, a place for a new machine is being prepared. This will be a 500 kilowatt turbogenerator of a new unified series.

"They are not giving us any breathers," explains the chief of the department for research on turbogenerators and large power machinery, V. L. Shapiro. "This year we intend to test a number of new units."

This, then, is the mood of the Elektrosila workers. Having completed one of their most important socialist obligations on the eve of the 69th anniversary of the Great October Revolution, they intend to contribute even more.

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ELECTRIC POWER GENERATION

CENTRAL DISPATCH OFFICE MONITORS POWER LOAD

Moscow KOMSOMOLSKAYA PRAVDA in Russian 28 Oct 86 p 1

[Article by G. Mironova: "The Scarce Kilowatt"]

[Text]--Moscow--Sometimes important guests come here. But in general outsiders seldom come here. In this huge semicircular hall there are only three persons. Before them is a panel with displays, and beyond is a screen stretching from the floor to the ceiling. All this makes one think of workers in a science fiction film about interstellar flight. But the screen is not showing black, star-studded space, but diagrams of the nation's power grid.

In the center is the senior dispatcher's seat. At this moment it is occupied by Olga Veniaminovna Ivanova. (Work here goes on around the clock.) Also on duty are the "co-pilot on the left", Evgeniy Ivanovich Kiriyyenko, and the "co-pilot on the right", Vladimir Leonidovich Lyansberg. Applying the term "pilot" to them is almost accurate, both as a description of what they do and because the responsibility and pressure on these dispatchers is no less than that placed on pilots. They are directing the method of electric power supply to the nation.

Weather reports are furnished every day to the Central Dispatcher Directorate [TsDU]. Dispatching schedules are rechecked. A decrease in air temperature by two degrees increases demand for power by one percent. The cold season is approaching, and with each week the curve representing the load on power plants moves steadily upward, and the generators must work all the harder. By the winter "peak", the power engineers must provide an increase of capacity of 36 million kilowatts. That is how much is demanded by the cold and by the lengthening evenings.

Alas, the power engineers have no supply dump where they can store up kilowatts during the summer and then use these supplies during high-demand periods. And peak winter loads are determined not only by the season. There are also peak load hours every day. As the day begins and enterprises begin operations, the demand for power jumps sharply upward. In the evening literally everybody needs power, and at night, there is a sharp decrease. Therefore, the power plants are constantly changing their work schedules, and the dispatchers are in control of them. And how easy it would be to control them if they had some spare kilowatts in the supply dumps -- some 20 million

that they could use to reliably increase power to the maximum loads and for extraordinary cases.

A report arrived at the Central Dispatcher Directorate that during the night of October 13th there was an emergency stoppage at the first power unit at the Azerbaydzhanskaya GRES. This caused a severe shortage of power in the Transcaucasia, exacerbated by the fact that repair work at the Armyanskaya Nuclear Power Plant was still going on. When something goes wrong with the heart, the whole organism feels bad. If there is a misfire at a power plant, it hits the entire economic mechanism. In order to save the situation, part of the capacity of the Central [Economic Region] and the Ukraine, where, actually, the situation was also difficult, was diverted to the Transcaucasia. This is similar to a blood transfusion, but the options open to the power engineers, just as they are for medical people in such situations, are limited. The throughput capability of power lines are strictly limited.

The dispatchers kept within the load limits. And all the same, it was necessary for the Transcaucasian cities to stop some of the equipment at their enterprises. Shutting off power to consumers - it sounds so dry in official language. But suppose it was your apartment that was shut off due to lack of power. That, certainly, cannot happen, but what would you experience at such a time? They do turn off plants.

Our Baku correspondent E. Abaskuliyeva reported, "Power Unit Number One at the Azerbaydzhanskaya GRES broke down due to a factory defect in a spot weld. The producer? The Taganrogskiy "Krasnyy Kotelschik" Plant. The plant's power units have broken down several times due to similar defects. In October there was breakage in pipes which had to be replaced. This repair was completed on October 15th."

The emergency situation was kept to a minimum, but there are no guarantees that it won't happen again someplace else. These are not the first complaints about Taganrog. They are seriously at fault for the boiler. Also at fault are those who were poorly prepared for winter. And this is no "private matter" for the power engineers. Now, with winter at the threshold, it is important to know the results of these preparations, and the situation in the branch.

The power engineers had a difficult summer. This was due to the accident at the Chernobyl Nuclear Power Plant and it was not only the fact that they had to "deduct" its capacity for a time. Exacting checks and preventive maintenance were done at other nuclear power plants. They are still in progress in some places. Also contributing to the decrease in output were low water levels in the rivers in the south. Therefore, even during summer there was a severe shortage of power. And during heavy loads, naturally, it is more difficult to prepare for winter conditions. But if there were a reserve...

There is essentially none today, but nevertheless there must be one -- this is non-operating capacity. As the TsDU's Deputy Chief Dispatcher A. F. Bondarenko stated, "The difference between that which is and that which is working is simply staggering." There are great gulfs between the installed and actual capacities at power plants. This results in something like the

"automobile principle." The speedometer reads all the way up to 150 kilometers per hour, but you seldom go that fast; there are no such roads.

It's the same way with power plants, and each has its own excuse -- this is not the type of fuel it uses, there is no auxiliary equipment, and so on. More and more often facts are published -- the Cheboksarskaya and the Nizhnekamskaya Hydroelectric Plants are working at 50-60 percent of capacity. At one time there were plans to build flood control dams, but these were not carried out. As a result there was less water stored than had been planned. The famous Krasnoyarskaya Hydroelectric Plant also cannot work at full capacity, since some planned work remains to be completed.

If we could get just a part of these "dead" kilowatts on line, it would make the winter easier to live through. This certainly cannot be done immediately; the programs which have now been developed will be difficult to complete. But this will allow us to "include" 22 million kilowatts in the grid.

We can calculate this as a prospect. But there are measures which will yield immediate results. Beginning in January, 1986 a new indicator for electric power was introduced. Previously the minimum expenditure of fuel per unit of energy was calculated. And it was unprofitable for the power plants to run at full capacity, since increased output brought about a corresponding increase in fuel consumption. One might again compare this with the automobile. Drivers know that if you want to save gasoline it is better to hold to an optimum speed. And before now the TsDU dispatchers, whose decisions are directive in nature, were not able to make the plants increase their capacity temporarily, because it was unprofitable. Beginning this year the results of labor have begun to be calculated by the coefficient of effectiveness of equipment use. Thermal power plants immediately produced an additional 10 million kilowatts! This didn't come about as a result of directives, but through economic leverage. Thus we still have quite a bit of power in reserve.

But the bottom line still doesn't balance. There is a projected shortage in generating capacity for the peak loads in the coldest periods. It is about 6.5 million kilowatts. This means that in December - January the TsDU dispatchers will have to face a difficult situation throughout the nation. In principle these figures would not come up, and it is now possible to correct the situation if we become more thrifty.

Valentina Sergeyevna Krylova called our editorial offices while this material was being prepared. She indignantly reported that holiday decorations were lit both day and night on "Bolshaya Ordynka" [Street]. We called the director of the Moscow Area Street Lighting Network, G. I. Yakimov. "Such a thing might occur during the month after a holiday," he said. "This is lighting which is plugged into our system and is turned off automatically. But lighting which is supplied to enterprises is monitored by designated duty personnel who are responsible for it. Often they turn out to be irresponsible, and therefore workers from Mosgorsvet [Electric Power Supply Establishment for the Street Lighting of the City of Moscow] often have to "cut off" all unnecessary lighting for the sake of economy without determining who the customer is."

In the case of the Bolshaya Ordynka, we asked that inspection of the lighting technicalities be fully investigated. The investigation took three days. It turned out that it was not all that easy to find who the specific guilty parties were. Nobody wanted to identify who had been burning these kilowatts in vain. And even the automobile parts plant, on whose behalf these particular street lights had been turned on, confidently came up with a number of excuses. Here is a sample. "We don't walk along Bolshaya Ordynka, so we didn't see that it was lit." The only one, however, who was able to turn off the holiday decorations was the enterprise's chief power engineer, N. A. Shurov. This was nine days after the holiday.

There is a lot of waste. Therefore in the power systems that are suffering the severest deficit - the Ukraine, North Caucasus, Kazakhstan, and Central Asia - this year it will be necessary to introduce steps to decrease consumers' peak power demands. This means that it will be necessary to stagger the start-up hours for enterprises and to vary their days off.

Such unloading eases the situation, and is easing it even now. However, the central dispatching directorate for the nation is not feeling the effect. Some localities are slow in introducing temporary winter schedules, and this means that even today the economy is beginning to suffer losses.

The shortage in generating capacity amounts to millions of kilowatts, but we can count millions in reserve. Only the deficit is real at this time, and is causing difficulty. But the reserve is theoretical, and constitutes a potential.

Winter is at hand. Winterization of housing and the heat network is supposed to be completed already. But we in the editorial office still are getting signals from the "cold addresses" of the country. Heat which is generated by the thermal and electric power plants is at times not making it to the consumers, but is being bled off into thin air. It would seem that nobody is doing this on purpose, but in the large-scale campaign for winterization there are still some gaps to be found.

The power engineers have prospects of reserves, but the reserves from savings are available to us now.

The numerous tableaux in the dispatcher hall are blinking, and figures follow one upon another. It is almost five o'clock. In one-half hour the "pilots" will experience their hardest time -- they must maintain the regime at its peak load.

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ELECTRIC POWER GENERATION

BRIEFS

SOLAR HOUSE DESCRIBED -- Crimean Oblast -- A building which has heat and hot water supplied by solar energy has been built on the Black Sea coast near Alushta. Its facing with panels of solar batteries is now being completed. Scientific and engineering services are deployed here from the experimental base of the Power Institute imeni G. M. Krzhizhanovskiy. A combined system of heat and cooling supply makes the new building tightly sealed. 1,200 square meters of external wall surface are occupied by flat solar ray collectors. The rays provide heat by warming the water circulating in the collectors, which will then support a given temperature inside the buildings. During inclement weather the batteries' functions are taken up by thermos tanks which store water heated up to 100 degrees. When they start to cool down, heat pumps are turned on. "The building consists of large scale stands welded to one another, on which we will test the various systems for using solar energy," said V. M. Pidayev, the leader of a group of scientists from the Crimean Institute. "The proposals for the scientists' work already looks like a list of services: departments of the solar station, solar heating, air conditioning and hot water supply, direct transformation of solar energy into electricity, a heliostat testing laboratory, and a design sector. [Text] [Article by L. Ryabchikov] [Kiev PRAVDA UKRAINY in Russian 24 Sep 86 p 4] 9016

NEW CAPACITY IN YAKUTIA-- Yakutsk-- On the eve of the October holiday the first two power units, rated at 12 megawatts each, came on line at a new gas-turbine power plant in Western Yakutia. The planned capacity for the GTS [gas-turbine plant] is 120 megawatts. By the end of this year, the builders will complete one addition module with a 24 megawatt capacity. The new plant's coming on-line will significantly decrease the shortage of electric power which is now being experienced by the diamond extraction industry in Yakutia. A part of the power from the new plant will be supplied to the construction site for Vilyuyskaya Hydroelectric Plant No. 3, where, as reported elsewhere in this newspaper, the river has been covered over and the construction workers have started working on the new facilities. [Text] [Article by Izvestiya Correspondent O. Borodin] [Moscow IZVESTIYA in Russian 6 Nov 86 p 1] 9016

NEW CONSTRUCTION AT TELMANSKAYA GES -- Ust-Ilimsk (Irkutskaya Oblast) -- A powerful explosion, which shattered the silence of the tayga, marked the beginning of a new stage of construction work at the Telmanskaya Hydroelectric Plant. For several months the drilling equipment has been digging into the side of Marfinaya Mountain, and it was decided to use this rock for construction of a new mooring facility and for paving roads leading to the industrial base of the construction site. And then a crew of explosives experts from the "Gidrospetsstroy" arrived. The crew included V. Kostin, V. Kutsenko, and I. Pechenkin. They intricately completed the complicated work. The peaceful explosion broke out more than 5,000 cubic meters of monolithic rock. The Telmanskaya GES facility is a project of the Ust-Ilim hydroelectric construction workers. In producing more than one billion kilowatt hours of inexpensive power per year, the new plant will completely supply the Sukholevskiy Mining and Industrial Complex. [Text] [Report by Part-Time Pravda Correspondent A. Shafranovskiy] [Moscow PRAVDA in Russian 28 Oct 86 p 1] 9016

PROGRESS ON KAYSHYADORSKAYA GAES -- Equipment installation has begun at a construction site in Lithuania at the nation's largest pumped-storage power plant [GAES]. The new GAES will have a capacity of 1,600 megawatts, and will allow us to balance out the production of and the demand for electric power in the northwest part of the nation, and will be able to rapidly provide the required capacity during peak demand periods. The construction workers are keeping strictly to schedule and are trying to make up for the lag which was permitted to occur in earlier years. They are paying special attention to improving the organization of labor, and to introducing the latest technology. Thus, filling the upper basin was substantially "thinned." Instead of 11 million cubic meters of earth, they placed ferroconcrete units here. This allowed them to complete the work in half the time and to save a large amount of construction materials. The first turbines of the Kayshyadorskaya GAES will begin providing power during 1988. The construction workers, who have come from many union republics, are exerting all possible effort so that the structure, which is listed in the Basic Directions for the Nation's Development, will be completed at a high level of quality and on time. [Text] [Article: "Strictly on Schedule"] [Moscow EKONOMICHESKAYA GAZETA No. 44, Oct 86, p 5] 9016

PROGRESS ON SULAK CASCADE--There is a series of hydroelectric plants on the Sulak mountain river in Dagestan. Recently the second hydroelectric unit of the Miatlinskaya GES was brought on line. With its introduction, the total capacity of the Sulakskiy Cascade has reached 1.3 million kilowatts. High in the mountains on this river we have started construction on yet a fourth GES, the Irganayskaya. In all there will be 15 hydroelectric plants built on the Sulak. The cheap electric power will be supplied to many industrial plants in the North Caucasus and in Trans-caucasia. Connected with the completion of the new GES in Dagestan is the appearance of the Chirkeyskeye and the Miatlinskoye Reservoirs, which regulate the current of the mountain rivers and serve as a reliable source of irrigation water for the arid lands of the Prikaspiyskaya Lowland. Supply of water to the cities and settlements of the mountain region is improved, and favorable conditions have been established for the development of industrial-scale fish farming in the autonomous republic. [Text] [Moscow IZVESTIYA in Russian 3 Sep 86 p 1] 9016

THIRD UNIT AT TASH-KUMYRSKAYA GES STARTED -- Kara-Kul -- A few days ago, the current from the second power unit of the Tash-Kumyrskaya GES poured into the nations power grid. The hydroelectric construction workers were full of happiness at their success. Not decreasing their tempo, they immediately began construction of the next power unit. Metal structural units and parts of the third turbine, which they intend to complete by the 70th anniversary of the October Revolution, are already on site. All collectives are already working harder in the socialist competition. There is shock work being done by the brigade of A. Kabayev and M. Muradbekov, a crew which builds the forms for poured concrete. They have set up the preliminary work for concrete work. Already about 100 cubic meters of concrete have been laid in the body of the dam by the brigade headed by T. Kolosov. This leading collective every day is exceeding its plan by 15-20 percent. [Text] [Frunze SOVETSKAYA KIRGIZIYA in Russian 5 Sep 86 p 2] 9016

PROGRESS AT ROGUNSKAYA GES -- Tadzhik SSR -- The basic construction work has been completed for a unique transportation facility which has been set up. It is a seven kilometer conveyer which carries crushed rock from the quarry to the dam at the Rogunskaya GES. There is not an artist who could remain unmoved at the sight of the sheer, almost colliding cliffs of the Rogunskoye Gorge. In many places the walls are covered with enormous webworks, a defense against rock slides. "Scientists predicted complex geology, but even they did not predict that the sides of the mountains would be so dangerous due to the frequency of talus," said the chief of the Rogun Hydroelectric Plant Construction Establishment, N. Savchenkov. "In preparing the site of the future dam, we have to drill, and this causes new cracks to appear, as well as landslides and cave-ins. The work here is done with rock bulldozers of 650-700 horse-power which are equipped with ten cubic meter capacity scoops. Right now the main objective of the construction work is the seven kilometer transport conveyer. A "Plotina" automated control unit [ASU] is planned for use in synchronizing the work of the quarry and the conveyer facility. Next year the Vakhsha River will be dammed. The dam will require about 17 million cubic meters of earth. This was done at the Nurekskaya GES by the inexhaustible BelAZ trucks, but their total productivity was only about half of that of this unique conveyer. [Moscow IZVESTIYA in Russian 2 Aug 86 p 1] 9016

CSO: 1822/040

CONSERVATION EFFORTS

SECRETARY CALLS FOR CONSERVATION IN KAMCHATKA

Moscow EKONOMICHESKAYA GAZETA in Russia No 33, Aug 86 p 15

[Article by P. Zinovyev, secretary, Kamchatka CPSU obkom, under "The Party's Economic Leadership" rubric: "Business-like, Economically and Comprehensively"]

[Text] In his speech, given at a great meeting convened for the presentation of the Order of Lenin to the city of Vladivostok, General Secretary of the CPSU Central Committee M. S. Gorbachev assigned important tasks related to the setting up in the Far East of a highly effective national economic complex with its own large-scale resource, and scientific-production base, and again underscored the need to carry out the quickest possible transition "from the slackening of growth rates to their acceleration, and from the predominance of extensive factors to utmost intensification based on scientific and technical progress".

This task relates in full to the Kamchatka Oblast. Nowadays the Kamchatka economy is being developed for the most part with imported fuel and raw materials. Hundreds of thousands of tons of solid and liquid fuel are delivered in a year through the ports of Vladivostok and Nakhodka to the peninsula. Every kilowatt of electric power and every kilocalorie of heat costs 1.5-fold to 2-fold more here than on the mainland.

The specific nature of the oblast's economy cannot tolerate even the least slackening in the search for new, more efficient methods for the frugal expenditure of its material and energy resources. Resource economization, one could say, is the decisive means by which the Kamchatka labor collectives meet the increasing demands for materials, fuel and electric power. By economizing on power and raw materials, they are bound to effect a good portion of their increase in production volumes during the 12th Five-Year Plan period.

As analysis has shown, the party obkom and the primary party organizations have not yet secured decisive changes in the way the collectives use their resources. The shortcomings, which were mentioned at the June (1986) Plenum of the CPSU Central Committee, are tenaciously holding on here as well. At times we have a very lenient attitude to the fact that electric power, heat and water are being used up for no purpose. All cases of raw materials and product losses

have for the present time not come under severe censure. The carrying out of their assignments for economizing resources and the level at which the resources are used has not always been taken into consideration in evaluations of the work done by the enterprises and collectives.

AFTER THE WORD COMES THE DEED

I recall one sitting of the party obkom bureau. The results of a review of the economizing of fuel and energy resources in the oblast's enterprises was under discussion. The discussion was candid and to the point. Strict requirements were made on Yu. Delnov, director of the Kamchatskaya TETs-1 [Heat and Electric Power Station], whose collective had failed to take effective measures to reduce fuel consumption and had not reduced the power and heat used for in-house needs. The system of economy measures was poorly supervised by the communists, the party bureau, and its secretary, A. Likhogray. The shop party organizations were unable to direct the power engineers' efforts towards achieving high final results.

This discussion went on to take up the problems of economizing within the power engineers' collective. At two open party meetings the topic of conversation was the responsibilities of the communists--specialists and operators--for miscalculations in resource economy. Shop party organizations and, in their turn the party groups, took up the tasks of the shifts and the brigades. The words were followed up by concrete deeds. At the suggestion of the workers, changes were made in the conditions for and organization of the competition for economizing of energy resources in the boiler and turbine and electrical shops. The party bureau appointed people who had not been involved in past activity to the commission for economizing. The production planning department has now been charged with supervising the carrying out of the integrated program for reducing energy resources consumption. The program was put together in accordance with critical remarks made by the communists.

The present shifts in the work being done by the power engineers can be explained by the extreme nature of the demands put on the workforce and by the altered approach to the business at hand. Since the beginning of the year, the Kamchatskaya TETs-1 has saved 445 t of fuel and has reduced the amount of electric power needed for in-house use. Other of the oblast's enterprises and organizations are now studying this collective's experience.

The TETs-1 example is significant. There is a need for a radical restructuring of resource economy in every enterprise and in every party organization. In order to begin using our reserves to good purpose, complacency and lenience need to be dispensed with for good. Allow me to bring up another figure: during the 11th Five-Year Plan period, the proportion of expenditures on materials out of the overall outlays for production of output in the oblast increased by 5 percent relative to 1980. This means that the Kamchatka labor collectives have no more important task than that of setting up a reliable barrier to the excessively "generous" consumption of energy and material resources.

Through analysis we are assured that wherever there is a lowering of the exacting standards of the party, the old ways die hard. Food industry enterprises,

are carrying out only 70-75 percent of their economizing assignments. The motor transport organizations of the Kamchatgeologiya, Kamchatrybprom and Kamchatavtotrans associations wrote off over 80 t of fuels and lubricants in a year, with no justification. The obkom of the party along with its sectorial departments see the low requirements for exactingness put on the work-force as the cause of this extravagance. The party bureaus were not strict enough when assigning responsibility to those guilty of the losses, and failed to require that the communists--the directors V. Lashtabeg, V. Potapenko and V. Zhuravlev--take measures to carry out the most stringent accounting and to strengthen their supervision.

The party organizations were less than sufficiently active in the baking enterprises, in the Kamchatskstroyaterialy [Kamchatka Building Materials] Combine and in arts industries associations which have seen overexpenditures of material valuables of hundreds of thousands of rubles during the year. Here, the engineering services have not outfitted the manufacturing operations and production processes with instruments for metering heat and power consumption, and have failed to make all-round preparations for the power network economy to operate seasonally.

The serious instances of neglect in the work of the party can be explained by the following: since the beginning of the year, 17 enterprises and organizations have failed to meet their assignments and their socialist obligations for economizing on boiler fuel, 21 for heat, and 23 for electric power. About 60 collectives have made no savings in diesel fuel and gasoline. Thus in the Penzhinskiy, Tigilskiy, Palanskiy and Karaginskiy sovkhozes, there was a 14 percent increase in fuel consumption per tractor. There were huge losses of motor vehicle fuel at the Petropavlovskiy Sovkhoz and the Vostochnaya Poultry Plant of up to 6 percent of their allocation. Nevertheless, strict party measures were not taken in each case.

OVERCOMING THE ATTRACTION OF THE OLD WAYS

Before anything else, the problem of setting norms for energy resource consumption requires the greatest attention. Up to now, excessive norms have been in effect in some enterprises, and excessively low norms have been in effect in others. Only 24-67 percent of the norms at individual enterprises have been scientifically substantiated.

It cannot be said that the directors and specialists do not comprehend the harm caused by lack of coordination in the setting of norms. However, no one is in a hurry to rectify the state of affairs. They are waiting until the specific norms arrive from the central departments. This is where we find the attraction to the old ways of working patently overlooked: as long, they say, as there is no "paperwork" from above, we can use our reserves to plan our outlays! And so there appear obligations which are carried out with a real lack of requisite effort. As for the oblast trade and cinema-provision administrations, the meat and milk enterprises and the cereal products combine, they generally failed to take five-year plan period obligations to economize on fuel and energy resources. The party organizations of these enterprises displayed inattentive and negligent attitudes to the problems of resource economy, and failed to condemn this wastefulness.

The mistakes were corrected, but only after the intervention of the party obkom. For our part, we concluded that not enough work was done with the people in these directions. We will have an end to these parasitical attitudes and to this devotion to free norms only through painstaking and systematic work to bring about improvements in the consumption of energy resources. It is important that we give broader dissemination to existing advanced experience. And it does exist.

In the far-eastern Petropavlovskaya Shipyard imeni V. I. Lenin Ship-Repair Production Association (Ye. Savitskiy, director; A. Shchukin, party committee secretary), for example, norms were developed for shop outlays of fuel, and for heat and electric power. They were also introduced at the Petropavlovskiy Ship Repair and Machinery Plant (S. Trifonov, director; V. Kalimullin, party committee secretary). The engineering services and the shop and department party organizations control the efforts of the public organizations and party groups with regard to economy and thrift.

And of course we need to search tirelessly for new ways to work. For instance, our trade fairs, where we sell surplus and unused valuables, provide a means for us to use material resources rationally. The USSR Gossnab Territorial Administration holds these fairs twice a year. In only the past year, above-norm stocks of raw materials and materials amounting to some R4.5 million were put into economic circulation.

Other useful undertakings have appeared as well. But we're not talking about our successes; no one will take them from us. It is more important, certainly, to mention that the party committees do not always actively support these undertakings. In generalizing the experience of the best of us, we still have not come to the point where it has been brought to those who will specifically be performing it. Economic and administrative means have been used poorly to eliminate shortcomings. The oblast party organization is capable of, and indeed is now economizing and being thrifty vis-a-vis the daily norm, the norm for each collective and for each worker.

CONTRARY TO LOGIC

Here I will pick out some more pressing problems which require immediated solutions. The labor collectives and party organizations of, for example, Kamchatka's Fishing Industry, are fairly actively involved with the mechanization and automation of production. The Kamchatrybprom [Kamchatka Fish Industry] Association, with the help of the Dalryba [Far Eastern Fish] VRPO [possibly All-Union Fishing Production Association] and USSR Minrybkhos [Ministry of the Fish Industry] have joined together in implementing measures for the technical reequipping of its shore-based fish canneries. Its refrigerating equipment is being renovated, new capacities are being introduced and more housing and social and cultural facilities are under construction. During the 11th Five-Year Plan period the shore-based canneries boosted their output of canned fish 1.4-fold, and of fish foodstuff products 1.7-fold.

Party organizations are supervising the introduction of new production methods. Everything would seem to be all right, but only at first glance. In fact, if a strict accounting is taken, we see that the needed turning point to resource economy has not been arrived at here. The technical policy connected with economy in manpower and material resources is being carried out sluggishly and incompletely by Minrybkhoz enterprises. We became convinced of this while working on the question of the problems associated with developing the fish industry--an industry of union specialization--for the bureau of the party obkom. The condition of the industry's fleet and the state of the equipment on the fish-processing ships is particularly disturbing.

The floating bases, the refrigerating factory ships and the large refrigerating trawlers were built as far back as the 1960's. Outlays for repairing them are increasing rapidly. Nevertheless, the ministry is in no hurry to rejuvenate the extractive fleet with ships, or to do the same for production with automatic production lines.

For a long time, the CPSU oblast committee, the oblispolkom and the communists of the Kamchatskles [Kamchatka Timber] Association have been unable to solve the problem of rationally using the forest areas and the comprehensive processing of timber. Timber-cutting operations have been carried out on the Kamchatka peninsula for over 50 years, but up to now lumber exports for allocated cutting areas have come to only 60 percent. During the recently elapsed five-year plan, 367,000 cubic meters of timber were left standing in the timber lots, with 39,000 cubic meters left after log removal. Some 780,000 cubic meters of waste products are produced from wood-processing operations. Of this, only 366,600 cubic meters is for production needs and heating. The rest remains unclaimed.

We have justified the proposal to construct a particle-board shop. This is a direct way to set up a waste-free timber conveyor. However, the arguments of the Giprodrevprom [State Institute for the Planning of Woodworking Industry Enterprises] won out, as if it were better to ship the particle-board to Kamchatka from other parts of the country than to manufacture it on-site out of their own raw materials. The proposals for comprehensive timber processing unfortunately found no support in USSR Minlesbumprom [Ministry of the Timber, Pulp and Paper, and Wood Processing Industry].

It seems that the institute's communists, along with its party committee ought to actively intervene in the matter and effect a resolution to the problem. They have the right to listen to the Giprodrevprom directors and the authors of the proposals who are acting contrary to logical solutions. Nor has the party committee of the ministry had its say. And it made no attempt at any of its meetings to listen to the workers on whom the solution to the problem depends, or to weigh all the pros or cons. Such a joint discussion ought to be conducted immediately. It would be a good idea to invite specialists, as well as Kamchatka's party and soviet workers to take part in it.

We direct similar critical remarks from other departments and organizations to Minrybkhoz party committees. The Mutnovsk geothermal field, where construction of a geothermal electric power station is planned. The starting up of this facility will greatly reduce fuel imports. This should be done as quickly

as possible, but the USSR and RSFSR ministries of geology, along with the sectorial scientific institutions have not yet proposed any effective technology for drilling wells in high-temperature and high-pressure conditions.

Resource economy is an important point for the application of our forces, our energy and our knowledge. The urgent task for the communists at the stage of restructuring is that of raising the level of motivation in the use of waste-free production methods and resource-saving principles. And this is to be done without resorting to rush work or shock work, thanks to the collective ensuring of efficient organization of labor.

12659

CSO: 1822/034

CONSERVATION EFFORTS

CONSERVATION OF NATURAL GAS ADVOCATED

Moscow IZVESTIYA in Russian 2 Sep 86 p 2

[Article by V. Vinogradov, head of the Moscow Petrochemical and Gas Industry Institute imeni I. M. Gubkin, Hero of Socialist Labor, professor; and M. Ravich, professor, Lenin Prize winner, under the "Economy: Experience, Reserves and Problems" rubric: "Why Warm the Sky?"]

[Text] Our country ranks first in the world in natural gas recovery. It presently plays a leading role as well in the fuel balance. The outstripping rates of development in the gas industry are being maintained during the 12th Five-Year Plan period. It is quite understandable that the conservation of gas by all possible means is of primary importance in circumstances such as these.

Naturally this question arises: how efficiently is our industry consuming gas, and what needs to be done to improve the manner in which gas is being used?

The performance efficiency of plants operating on natural gas fluctuates greatly. At modern power stations, the heat given off from the burning of gas is used first to generate and heat up steam, and then to heat the water being fed into the boilers, and the air fed into the burners. This makes it possible to sharply reduce the amount of heat lost by the combustion products discharged out the smokestack. Power station boiler plants have an efficiency coefficient greater than 90 percent.

A great number of furnaces for heating metal and other materials are in operation in machine building plants and in other industrial sectors. The situation here is totally different. The products of gas combustion are discharged into the air at a temperature on the order of 1,000°. As a result, over half of the thermal energy produced through the combustion of the gas is irretrievably lost. Moreover, some of the heat is lost through the furnace walls because of incomplete gas combustion. These types of plants, which sometimes operate with a total efficiency of only about 10 percent, should be called wasters of our "blue gold".

One could raise the objection that thermal electric power stations are one thing, but the conditions in the industry are totally different. But gas can be used much more efficiently in the plants.

The Volgograd Tractor Plant has begun drawing off the combustion products from the heat-treating furnaces into driers, following an uncomplicated reconstruction process. Secondary heat utilization has made it possible for the plant to save one million m³ of natural gas per year. Outlays were paid back in 9 months.

Let's take an example from a different sector. At the Keramik Plant and the Vysokovskiy Brick Works in Gorkiy, they burned natural gas in the kilns used to fire bricks and ceramics, as well as in the fireboxes of the drier units. Thereafter, the driers were heated with combustion products drawn off from the firing kilns. Over a period of 15 years of operating these combined installations at these two construction materials plants in Gorkiy, 150 million m³ of natural gas was saved. The capital investments expended here were paid back after three months.

Calculations indicate that the introduction of methods for combined utilization of combustion products in just the Gorkiy Oblast's building materials industry could save 65 million m³ of gas per year, and would free R12 million of capital investments from the fuel industry.

A far greater quantity of gas can be saved by introducing advanced production methods in the construction materials industries of all countries.

The main gas pipeline compressor stations are major consumers of natural gas. Suffice it to say that the gas consumed at the USSR's compressor plants roughly corresponds to the total natural gas recovered in five European countries--the FRG, France, Italy, Hungary and Poland--taken together. And 60-70 percent of the heat from the burned gas is irretrievably lost.

And meanwhile, the secondary heat of the combustion products formed at the compressor plants could be directed to meet the thermal needs for enterprises in agriculture, light industry, the wood-working industry and in other industrial sectors, whenever they are located near the compressor plants.

The development of units for the integrated staged utilization of the heat from natural gas combustion products has been registered on USSR VDNKh [Exhibition of USSR National Economic Achievements] certificates. Their use has been recommended by USSR Gosplan, USSR Gossnab and the USSR Ministry of the Gas Industry. However, the introduction of these units is proceeding unjustifiably slowly. As a result, we are missing an opportunity to save about 100 billion m³ of natural gas per year, even though the outlays for setting up the installations we are talking about pay for themselves very quickly.

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CONSERVATION EFFORTS

BUDAPEST ENERGY CONSERVATION INSTITUTE DESCRIBED

Moscow PRAVDA in Russian 16 Sep 86 p 4

[Article by PRAVDA correspondent V. Gerasimov: "Reserves of Economy: Experience Is the Property of All"]

[Text] Budapest, Sept--On the bank of the Danube, next to Parliament, there rises a building of red brick, girded about with a band of broad windows. This is the Institute for Rational Energy Utilization, which contributes in no small way to the carrying out of the corresponding state program. The last five-year plan period saw the introduction of almost 1,500 developments conducive to economy. Scientists were direct participants here.

As Ishtvan Papp, general director of the institute, says, "The fact that our co-workers are involved in developing, designing and selling these innovations has a lot to do with reducing the time needed to put them into production. We retain export rights to the international market, which motivates those industrial enterprises and cooperatives who work with us under contracts. In our joint effort, they see an opportunity to more rapidly increase export volumes while putting energy-saving devices and equipment into production. Each of our departments is a self-sufficient cost-accounting unit. They have a high degree of independence as regards their displaying initiative, in the ways in which they seek out clients and in concluding economic contracts."

Ishtvan Papp takes me through the building. There are colorful photographs on the walls. We see scale models of some of the units developed here. I am given visual demonstrations of what has been done here in recent years. One large photograph shows the waste-recovery station at the vegetable-oil plant in Martfyu. It burns about 120,000 t of sunflower seed husks per year, thus supplying power to the plant. A number of agricultural cooperatives and state farms have put small-scale TES's [thermal electric power stations] and TETs's [heat and electric power stations] into operation, using unneeded chaff, dry cornstalks and agricultural waste as combustible fuel.

We stop for a while at one of the glass "cupolas" under which, as the general director explains, is located a miniature copy of a reclamation system for glass plants and other enterprises which use high-temperature furnaces. The heat from the smoke collector produces the steam which helps move a turbine. At the glass plant in Oroshkhaza, in the southern part of the country, an installation such as this provides hot water to the plant and the city's living quarters, heats apartments and generates electric power.

"You'll come across our installations in a number of plants", notes Ishtvan Papp. "They derive a very great effect, for instance, through the use of the flue gases at the integrated iron and steel works. Just a single steam recovery boiler at the Danube Integrated Iron and Steel Works saves 15,000 t of oil per year."

The problem of utilizing secondary heat is presently being solved in a number of collectives. They show me an installation which is in operation at an oil refinery in Szakhalombatta, and which is outfitted with Soviet equipment.

"Working in collaboration with Soviet specialists, we have developed energy-saving installations for the compressor stations on the main gas pipelines. They effect up to a third in fuel savings," the institute's general director tells us. "Innovations need to put into practice more quickly."

Hungarian specialists consider as urgent the question of setting up a joint Hungarian-Soviet enterprise which would be capable of starting up production of heat recovery equipment for various sectors and units for use at gas refineries. It needs to be said that over twenty similar proposals have recently come from these two parties. They are presently under discussion, and the basic principles concerning the activity of the joint associations are being worked out. The problems associated with the more rapid implementation of energy-saving production methods and the introduction of new equipment models by joint forces still remain ripe for solving, as do the problems of their joint production.

The contacts and ties between the institute's developers and designers and the Soviet specialists are traditional. Some 18 topics in particular have been slated for joint research efforts. Some of them have been successfully completed. An agreement was recently reached with the Atomteploelektroproyekt [possibly Thermonuclear Electric Power-Production Equipment Design] Institute on the setting up of a joint collective to design and devise economically operating equipment.

Ishtvan Papp told me that greenhouses had been built at the Thermal Electric Power Station imeni Yuriy Gagarin in Vishonta. They were heated by processed steam. Later, greenhouses of this type were put in operation near Riga, Latvia, and are now being erected at the Razdanskaya GRES [State Regional Electric Power Station] in Armenia. Also in operation at the Razdanskaya GRES is an air-capacitor installation designed in the Hungarian institute. An identical unit has been sent to the Ivanovskaya TETs-3 and a special-type unit has been sent to the Far North to the Bilibinskaya AES. Along with Tekhnopromeksport, a Soviet foreign trade organization, and Budimeks, of Poland, the Hungarian institute is participating in the construction of the Isfahan AES in Iran.

The institute delivered about 70 economical, simplified cold-storage units for the USSR agroindustrial complex. They are to be erected soon. The Budapest developers are presently preparing new types of fruit and vegetable storage units for Soviet clients.

A number of other Hungarian institutes are taking part in developing new units which draw less power. Industry has initiated production of economical trolley buses and subway trains. Freight transport is being converted to diesel fuel. An exchange of experience has been set up in this field with researchers and specialists from the GDR, Czechoslovakia and Poland.

The Hungarian government recently increased its bonus fund, which had been introduced several years ago for those enterprises showing considerable energy savings, from 10 million to 50 million forints. Bonuses are one of many economic levers which are forcing business executives to be economical. The preferential loan system has proved its worth, and it has also been conducive to the introduction of new energy-saving equipment. And the results? During the last five-year plan period, energy demand in industry alone was reduced by 13-14 percent, which is equal, according to a report in the newspaper NEPSABADSHAG, to a saving of almost .5 million t of oil per annum.

And during this five-year plan period, we envisage a continued reduction in proportionate power consumption. If a one percent growth in the national income during the last five-year plan period required an increase in power consumption of only 0.69 percent, then we are now faced with the task of lowering the latter figure to 0.4 percent.

Hungary's energy balance has made a change for the better. In 1980, petroleum occupied almost 38 percent of her energy balance, this share dropping to 33 percent last year.

In Miskolc, second-largest city in the Hungarian People's Republic after the capital, I became acquainted with the work being done by the Technical Center for Energy Economy. Here, you can avail yourself of the skilled advice of specialists on how to use various sorts of domestic equipment and insulating materials correctly, so as not to "heat the out-of-doors".

There is a great demand for consultation such as this. A number of new types of energy-saving equipment have appeared in our country, and they are saving up to 25 percent of our heat and are effecting up to 80 percent savings in electric power.

Both the scientists and specialists have a great many plans. The type design institute suggested that heating collectors be installed beneath the floor, and although this raises the construction costs by 10 percent, it also effects a 25 percent reduction in power consumption and makes the apartment more spacious. It is important that the occupants be provided with thermostats, and work is underway in this direction.

A great amount of attention is being given to the use of insulating materials, as well as blanketed doors and window frames. Preferential loans have been introduced for those purchasing energy-saving equipment. The following case has been given study: if individual or cooperative builders use the most up-to-date thermal insulating equipment and materials, then they can also count on 25,000 forints of free aid (about \$1,000).

Although a great deal has been accomplished, the Hungarian economists are not satisfied to rest on their laurels. The State Planning Committee of the Hungarian People's Republic, along with the financial organs intend to make the economic norms even more strict, to increase the demands on the production collectives as well as the population, and to support and keep up their motivation in the economical use of fuel and combustible materials and electric power. The Hungarian communists summon everyone to rally around the slogan: "Resource economy must become a permanent factor in the development of the national economy!"

12659

CSO: 1822/034

LABOR

ALL-UNION TRADE OFFICIAL ON WAGE REORGANIZATION

Moscow TRUD in Russian 4 Oct 86 p 2

[Interview with R.N. Shuruyev, chief of the AUCCTU Department of Wages and Economic Work by TRUD correspondent: "In Our Common Interests--On Ways of Radically Restructuring Wages" First paragraph is TRUD introduction.]

[Text] As has already been reported in the press, the decree of the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU "On Improving Organization of Wages and Introducing New Wage Rates and Salaries for Personnel of Sectors of the National Economy" has been enacted. Vasily Nikolayevich Shuruyev, chief of the Department of Wages and Economic Work, answered the questions of a TRUD correspondent connected with the tasks and directions needed to implement this decree.

[Question] Vasily Nikolayevich, let us begin with why the need arose for restructuring wages?

[Answer] The rates and salaries existing at the present time were introduced in 1969-1975 and now no longer meet present requirements for acceleration and intensification of production. They do not exert the required influence on growth of productivity, quality of labor and economy of material, fuel and power and other resources. The performance of most complicated and responsible operations is being inadequately provided with incentives. Differences in the pay of workers and specialists depending on their skill and work efficiency have been unjustifiably reduced.

The rate share, the basis of state regulation of wages, has been reduced to 50-60 percent of wages. The payment of bonuses and various kinds of supplementary payments not connected with work results has become widespread on a massive scale.

The quality of norms and norms of labor expenditures has markedly deteriorated. At many enterprises, the return is still low from brigade and other forms of collective organization and stimulation of labor. All this has negatively affected production and the frame of mind of the people. For this reason the 27th CPSU Congress proposed the task to improve decisively material stimulation and to put things in order in this important matter during the 12th Five-Year Plan.

[Question] What are the special characteristics of the forthcoming restructuring as compared to earlier implemented measures?

[Answer] First, it is necessary to emphasize the large scale of this restructuring, which is bound to affect in excess of 75 million workers in the production sectors. This will be the largest measure taken in the field of wages in recent years.

Second, the procedure for implementation of the outlined measures will be fundamentally changed. Whereas formerly raising wage rates and salaries was basically implemented through centralization of state allotments, now the funds required for this will have to be earned by the collectives themselves on the basis of improvement of economic activity and finding reserves for growth of labor productivity, revision of norms and improvements in the management structure.

Starting in 1987, this will contribute to the formation of a wage fund on the basis of stable long-term norms in close contact with growth of products needed by the country and higher efficiency and quality of work.

Wage improvement should be an ingredient in introducing the new economic mechanism and in converting to full cost accounting and self-financing.

Third, the outlined measures should be considered as an important means of boosting the labor and social-political activity of workers. Labor collectives are being granted broad rights and opportunities for increasing the material stimulation of workers and specialists, reallocating released workers primarily within enterprises for organization of work in the second and third shifts and modernizing and expanding production.

Fourth, restructuring will be of a complex character. It will include all constituent elements in the wage organization: the rate system, supplementary payments for working conditions and intensity, norm setting, collective forms of payment and awarding of bonuses.

In other words, all the conditions are being created for making wages strictly dependent on the quantity and quality of labor and end work results.

It is necessary to point out that the introduction of the new wage rates and salaries can be done on a step by step basis for individual structural units as well as for categories and occupations of enterprise workers, but the main thing is that it is in accordance with accumulation of funds. In the implementation of the outlined measures, trade-union organizations must most immediately and actively participate.

In all cases, salaries for supervisory and other personnel of enterprises' managerial apparatus will be introduced only after the rates and salaries of other workers have been raised.

[Question] What are the principal changes in the rate system?

[Answer] The new rate system is aimed at increasing the stimulation of growth of the skill and occupational mastery of workers and specialists in the interest of accelerating scientific and technical progress and expanding differentiations in wages depending on the contribution of workers to the overall results of the collective's work.

On the average, growth of wage rates and salaries will amount to 25-30 percent. At the same time, personnel engaged in the development, introduction and servicing of new high-efficiency equipment will be especially singled out in terms of their earnings. The correlation between the rates of bottom and top skill ratings will be no less than 1:1.8 and in the 8-grade rate schedule of machine building, it will be increased to 1:2. Salaries of engineering and technical personnel will be raised 30-35 percent and for technologists, designers and foremen 40-45 percent. The gap between minimum and maximum salaries will be significantly increased according to the position. For engineers, four skill categories have been introduced: engineer, second-category engineer, first-category engineer, leading engineer.

In addition to higher salaries, increases may be used for labor achievements and performance of especially responsible work. Their size may be as much as 50 percent of the salary. The setting of salary sizes for engineering and technical personnel now will not be limited to the requirements of adherence to average-salary level, but to a correlation between the levels of senior and junior specialists. Only one requirement will be retained--all measures relating to remuneration of labor must be carried out within the limits of the planned wage fund.

[Question] And what changes will have to be made in norm setting of labor?

[Answer] Directions of work and measures for improving norm setting of labor have already been determined by the well-known decree of the USSR Council of Ministers and the AUCCTU, enacted last year.

Unfortunately, it must be said that it is still being poorly fulfilled. In many labor collectives, the content of this important document has not even been brought to the attention of workers, especially in regard to the manner of revision of norms and normative expenditures of labor.

Some economic managers with enviable determination hang on to the old approach for replacement of norms without due analysis of their intensiveness and without implementation of concrete technical and organizational measures for boosting labor productivity.

The decree of the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU did not establish centralized amounts for raising output norms with the introduction of the new rates and salaries. This increases the responsibility of economic and trade-union organs for work relating to improving the norm setting of labor. Having given permission for the introduction of new rates and salaries, they must analyze in depth the validity of proposals pertaining to sizes of output norms on the basis of certification and conducted rationalization of specific jobs.

It should be noted that we are not dealing solely with output norms, that is with norms for piece-rate workers. A great deal of attention must be paid to service norms and the number of personnel in all units and services of enterprises in order to establish equal intensiveness of norms for all the production sectors. The job of trade-union committees is to ensure the active participation in this work of commissions for wages and norm setting of labor and public bureaus for norm setting and organization of labor.

As for subsequent revision of norms, prior to the next certification of work places, it will be possible only in the event that equipment and technology are changed or work organization is radically improved.

[Question] Lately, a great deal has been said about the necessity of improving wage forms and systems. What is expected to be done in this direction?

[Answer] Actually, the feasibility of using this or that wage system in production has been broadly discussed among collectives. In the course of preparatory work, the effectiveness of existing systems in different sectors will have to be comprehensively evaluated. Special attention should be paid to further improvement of brigade and other forms of collective labor organization. Unfortunately, it must be admitted that frequently the return from brigades is small because they have not been told what the end results of work must be like and have not been informed of complex norms and rates as well as of cost-accounting norms. Foremen and shop managers meddle in the allocation of brigade earnings. All this does not permit full realization of the advantages of collective labor organization forms. But the future is theirs.

Consequently in the course of preparations for the introduction of new rates and salaries, it will be necessary to overcome completely formalism in the use of collective forms of organization and remuneration of labor and to introduce more broadly cost accounting and the contract both on the brigade level and in the operation of sectors and shops.

[Question] How should the expanded rights of labor collectives be specifically demonstrated in the solution of wage questions?

[Answer] The rights of labor collectives have been significantly expanded. This applies practically to all aspects of work connected with improvement of wages. First of all, it is necessary to deal with involvement of labor collectives in preparatory work for determining and using reserves and accumulated funds and for greater effectiveness of socialist competition and of scientific and technical work.

Major importance is to be attached to the proper designation of grades of workers and categories of specialists as well as determination of supplementary payments for work conditions, the sizes of which should be differentiated depending on the concrete conditions of work at each work place while taking into consideration the results of its certification and rationalization. The rights of enterprises have been expanded in regard to determination of supplementary payments for vocational skill and for work

based on sectoral, intersectoral and other progressive norms. These questions have to be solved by management in coordination with trade unions with obligatory consideration of the opinions of the respective collectives. In all cases, a skilled approach and strict observance of norms of the legislation are required.

[Question] Well, how would it be better to start preparatory work at an enterprise?

[Answer] Of course, with well organized, carefully thought out explanatory work. Restructuring the system of awarding bonuses to workers, engineering and technical personnel and employees should be of first priority and, in our view, the most important thing at this time. The fact is that the decree provides for putting a new system into operation as of 1 January 1987. Enterprises must independently develop and evaluate the indicators and conditions of awarding bonuses to workers and all categories of specialists and employees prior to enactment of the provisions. The main thing for bonus provisions is really to stimulate high-production and highly skilled labor, qualitative and unconditional fulfillment of contractual deliveries and other indicators ensuring high end work results. This will be helped by the transition from individual to collective crediting of bonuses. Furthermore, in the distribution of collective bonuses, the coefficient of labor participation should be used everywhere.

[Question] The improvement of the wage organization will entail the release of some personnel. How will they be used?

[Answer] A part of the workers will be used, as has already been pointed out, at the same enterprise. But a part will get jobs at other enterprises. The question of reduction by this or that worker needs to be resolved with wide publicity, with special attention paid to each one.

Trade-union councils and committees, together with labor and administrative organs of enterprises, will be obliged to participate most actively in this work. In short, in this work, it will be necessary to display a sensitive attitude toward released personnel and to look after their timely retraining, job placement and to observe strictly established legislative guarantees. Reductions of their pay at a new place of work cannot be permitted.

As you know, the CPSU Central Committee Politburo enacted a decision to turn to labor collectives, party, trade-union and komsomol organizations in connection with the problems that are arising in the course of the practical implementation of the decree of the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU. Confidence was expressed that workers will understand the outlined measures for restructuring the wage system and, with their dedicated labor, will ensure the successful fulfillment of the 12th Five-Year Plan targets.

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CSO:1828/32

LABOR

GOSKOMTRUD OFFICIAL INTERVIEWED ON INDIVIDUAL LABOR ACTIVITY

Moscow IZVESTIYA in Russian 25 Nov 86 p 2

[Interview by S. Livshin with Leonid Emmanuilovich Kunelskiy, doctor of economic sciences, member of the board, Goskomtrud USSR: "Both a Home Workshop and Family Studio"]

[Text] Answering questions connected with the new USSR Law on Individual Labor Activity is L. E. Kunelskiy, doctor of economic sciences, member of the board, USSR Goskomtrud [State Committee on Labor and Social Problems].

[Question] Leonid Emmanuilovich, readers V. Pakhomov of Moscow Oblast, Ye. Kucher (Krasnodarskiy Kray), V. Skorovarov of Rostov-na-Donu, and many others want to learn more details on what the new law brings to the country's economy, and to the family budget and everyday life.

[Answer] In order to better present the scope of operation of this law and its zone of influence, I'd like to remind you that in this country we now have over 55 million retired persons, millions of housewives, and over 5 million students at tekhnikums (I'm speaking only about the on-campus departments). For many of these persons, the Law on Individual Labor Activity which was adopted will become an important incentive both economically and legally--and what is also quite important, psychologically. After all, public opinion as well as legislation of years gone by have shaped a contemptuous attitude in the people's consciousness toward "private traders" (and incidentally, it's high time to do away with that obsolete term). And now, it has been clearly stated from the rostrum of the USSR Supreme Soviet that any labor which brings benefits to the country and to the people--be it work at a plant, in the field, or in a home workshop--should be encouraged.

It's not only a question of retired persons and students. Sociological research conducted in the cities of Western Siberia has shown that 17 percent of the workers there had a second paid job in their free time, and another 27 percent wanted to have such jobs.

The new law will permit not only involving people in useful matters, but also eliminating shortages in domestic services and consumer goods. This will force service and light industry enterprises to pay more attention to the consumers; they will no longer be monopolists and will not be able to impose their own conditions and terms. The family working group, with its greater flexibility to react to demand and fashions can become a serious competitor.

[Question] A number of readers have expressed doubts: whether there will not be a repetition of the excesses which occurred following adoption of the Law on the Struggle with Unearned Income? "I have callouses on my hands from picking nuts, and they want me to register as a 'self-seeking grabber,'" bitterly writes N. Neverov from Tbilisi. "You help your neighbor fix his roof after work, and at the very first blow of the hammer, an inspector from the finance department shoes up and threatens you with a fine..."

[Answer] One of the tasks for the Law on Individual Labor Activity is to provide a clear-cut legal basis for it. This act does not simply regulate work based exclusively on the personal labor of citizens and the members of their families--it also encourages such work in every way. One would think that an old woman who's knitted a pair of socks or two to sell; a typist who retypes an article for wages; that same roofer who was helping his neighbor; and thousands of other people who render one-time services in small amounts henceforth should not cause others to regard them with caution and suspicion. The new law legalizes their labor, and encourages it in every respect. Such one-time services and minor one-time jobs do not require special permission. Nor is permission needed for those who engage in creative pursuits in the areas of science, technology, literature or art.

If, however, an individual's work is of a systematic nature, then he must of course have permission, proof of registration, or a patent. I wish to stress that the amount of the tax and the cost of a patent need not be excessive--that would immediately discourage people from taking up such work. Nor does it pay to count on excessive profits, or the possibility of dealing "on the left" on a legal basis, hiding one's income from taxation. Here the principle of social justice must be maintained, such that a citizen's income corresponds with the amount of personal labor invested.

One may purchase for individual labor activity equipment, instruments, or raw materials in stores or at enterprises (for example, goods difficult to dispose of, or shop-worn articles). In addition, local organs of USSR Gos-snab will concern themselves with providing everything needed by those who desire to turn their hands to cottage industry or to the services sphere. To this add bank loans, allocation of space, supplying information, and entering contracts with enterprises which will assist the working individual to set up production and sell the products. The incentive and stimulating nature of the new law is so clear that one would think that there would be no attraction for the prohibitiveness which, as the readers justly noted, used to bring so much unpleasantness to honest workers.

[Question] As Muscovite P. Morozkin points out, there's still another danger: "What in the world is this: we're indulging the smart operators; it's almost as if the NEP were resurrected!"

[Answer] In this country the state form of property remains absolutely predominant, and the basic principle of socialism is functioning: "From each according to his abilities--to each according to his labor." The state regulates the individual labor activity--it is not based on exploitation and private capital, but on the personal labor participation of the citizens. In a word, the new law does not indulge private property instincts in any way.

[Question] "Early last spring I bought some seeds, planted them, raised fresh cucumbers and sold them. It was an awful lot of work, but it brought joy to my heart: people from all social groups stood in line to buy them and praised me. My own opinion is that as long as the shelves are not exactly overflowing with vegetables from state and cooperative trade, they should help people get land, and not just count and recount every pickle we grow," writes V. Bosatskiy of Brest Oblast. What is your opinion, Leonid Emmanuilovich?

[Answer] First let's go back to the figures. Private subsidiary farms (and we have 34 million in the country) provide about 30 percent of the vegetables, milk, meat and eggs; 60 percent of the honey; and 58 percent of the potatoes. Can we reject such a supplement to our tables? It goes without saying we cannot.

Article 17 of the USSR Constitution states that in our country individual labor activity in the sphere of agriculture is permitted, along with other kinds. The decree of the CPSU Central Committee and USSR Council of Ministers, "On Further Improving the Economic Mechanism for Management in the Country's Agro-industrial Complex," speaks of how to support the development of private subsidiary farms. All existing statutes in this area are being retained.

As before, such proven forms as transferring poultry and animals from a kolkhos to private individuals for raising will continue to be developed, as will signing contracts with these individuals for raising various kinds of agricultural products. This assumes providing assistance to them as well--fertilizers, feeds, and also incentives for good work in selling products in short supply. There are also prospects here for family contracts. In a word, everything that accelerates fulfillment of the Food Program, which does not lead to receiving unearned income is supported by the new law. I believe that V. Bosatskiy and others who like to work for awhile in their subsidiary farm plots, in a community garden, or in a kitchen garden, deserve support.

[Question] Many comments have been received from IZVESTIYA readers on the published account of the experience of the fraternal countries and a number of union republics in introducing on an individual contract basis activities in the services sphere and public catering. The majority feels that this experiment is useful. But some voices are being raised on the point that the "private element" will cause chaos in this sector. For example, B. Borisov of Dushanbe, describing the problem of home-made lozenges and fruit drops, sees in this only a criminal aspect...

[Answer] Let's make it clear: individual industry and services should not replace already-existing forms of services in the state sector, but should supplement them. The attraction for building enormous domestic services centers, restaurants which seat hundreds--in a word, all sorts of overcentralization and the general switch to so-called "industrial rails," have led to a situation in which our services often seem to exist for themselves alone and are divorced from the real needs of the populace. This gap between supply and demand should also be filled by those who engage in individual labor activity.

Which of us is not familiar with the following scene: As soon as a new house is occupied, people show up in the driveway and ask, "Don't you want your doors insulated, glass installed, cornices nailed down, or TV antenna hooked up?" At train stations smart "individual operators" with a vehicle always appear: "Where do you want to go?"

Before, this would have brought the threat of confrontation with the police; but now--as long as the rules stipulated by the new law are observed--this will become a common form of service. The law merely makes the legal norms coincide with the practices which have evolved. Instead of looking up a handyman, who would provide services to you while looking over his shoulder--if only one could get things without unpleasantness!--it will be possible to go to the nearest home workshop, barber shop, photo studio, dental suite, or other studio; or, to summon "your own" craftsman to your house. Just think about the time spent and the wear on one's nerves from filling out forms, squabbling with repairmen; waiting for the TV serviceman--and the prospects of a new procedure, which expands the range and adds to the present system of services, will become clear to you.

As concerns cafes or cheburek [Crimean meat pasty] stalls, which may be offered for rent to family groups, and the preparation of national or traditional dishes, the law leaves this to the discretion of the local Soviets. The experience of the Baltic States and Georgia proves that this variant guarantees profits to the state from the public catering points, and guarantees the customers a variety of dishes and high standards of service. The functions of state organizations will consist of monitoring food quality and fire safety for such cafes, and assistance in purchasing equipment and food products. And as far as how the work is divided among the members of the family group, considering the free time of each one, the possibility of combining jobs and so on--that is entirely their own affair. Here the principle of complete self-support goes into effect, which provides the incentive for greater activity and efficiency.

The same applies to the lozenges, to pickled foods, or to other dishes traditional for one region or another: if purchasers can get tastier things from you than from others, then they'll come to your place. They will vote, so to speak, for your products with their money. Nor does the state come off the loser, since the state receives an appropriate tax or patent fee for the sales of these lozenges or from the maker of these candied fruit drops. Incidentally, I'd like to reiterate that the purchase of a patent for a certain kind of work frees a person from the obligation to pay taxes for this work and to present a statement of his earnings.

[Question] Certain readers believe that recording only specified kinds of services and home industries in the new law will hinder the development of others. They are afraid that the procedure for applying for a patent or permission for individual work will turn out to be too cumbersome...

[Answer] The law provides that other kinds of services and home industry or crafts are permitted, if they are not forbidden by other legislation. Time will tell what the demand for them will be. And the forms of labor participation will vary widely. At the same time, the state encourages people

engaged in individual labor activity to band together in cooperatives and associations. There is still time to carefully think over and to detail everything before the law goes into effect on 1 May 1987.

Of course a lot more energy and efficiency will now be required of the local soviets in order to help with everything necessary for engaging in individual labor activity, and to set up control over it.

But the socio-economic effect should cover the cost of all the efforts. The policy for maximum satisfaction of the needs of the Soviet people, proclaimed at the 27th CPSU Congress, will receive further development with the expansion of individual labor activity.

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LABOR

KOLKHOZ INCOME, WAGE SYSTEM ANALYZED

Moscow PRAVDA in Russian 3 Oct 86 p 2

[Article by Ye. Selin, section chief at the Scientific Research Institute of Labor and candidate of economic sciences, and A. Kamayeva, senior scientific associate, Scientific Research Institute of Labor: "Pay Commensurate With Income: The Agricultural Industry Is Reorganized"]

[Text] Moscow--Now long ago one of us happened to hear the chairman of a major kolkhoz saying, "We still haven't managed to master the [collective] contract and already we're obliged to switch to payment by gross income. Maybe that's enough innovation! To my mind, non-scheduled work is a good thing, we've grown accustomed to it."

They ought to leave well enough alone, so to speak. The collective contract on most of the farms has borne its fruit, but, of course, we are concerned not with replacing the system with a new one--rather, with improving and extending it.

Gross income, for example, has become the key indicator for wage distribution at the Kolkhoz imeni XIX Partsyezd, Krasnogvardeyskiy Rayon, Krym Oblast. The brigades on this farms have been using such a system for 3 years. Let's take a look in more detail at the experience they have acquired.

"Remarkable changes have taken place," kolkhoz chairman, V. Seroshtan, told us. "Everyone tries to figure out how to save, comparing expenditures and results. So long as gross income was not considered when it came to pay, brigade leaders and section chiefs would try to extract by hook or crook as much equipment and fertilizer as they could. They took whatever was offered. There was an economic basis for this attitude toward resources. Excess did not diminish earnings. Now, however, you hear an entirely different set of requests: 'Take this extra equipment.' 'Don't bring us unnecessary materials.' 'These workers are available for a transfer.'"

What has happened? To answer this question, let us define more precisely the concept of gross income. It is output value after deduction of expenditures for its production. This means, the greater the yield and the less resources consumed, the higher the income. And if pay directly depends on it, naturally, wages are going to increase.

The collective contract on most kolkhozes and sovkhoses was aimed primarily at production output and only loosely tied to cost accounting. Expenditures have not been taken into account or considered as an additional charge against wages.

It cannot be said that such a system altogether fails to provide incentives for the better utilization of resources. But little is allotted for compensation. At the Kolkhoz imeni XIX Partsyezd with which we are familiar, over a 3-year period prior to the changeover to payment by gross income, each worker was paid an average premium of only 35 rubles for economizing.

And in the country as a whole? The thrift bonus in the labor payment fund of both kolkhoz and sovkhos workers amounts to less than 1 percent.

Isn't this partly why material expenditures in a host of farms are growing at a far more rapid rate than production output? Year after year greater resources are being expended per quintal of grain, of meat, of milk. Incidentally, the Kolkhoz imeni XIX Partsyezd was no exception. Here, too, expenditures were swiftly outstripping the pace of production. In the first 2 years of the past 5-year plan expenditures rose by a fourth, whereas the volume of production rose by only 8 percent. Moreover, labor pay rose at a higher rate by comparison with productivity.

To put into practice the principle of a farm's paying for itself, and to make the anti-expenditure mechanism operate at full force, they based the farm's operation on gross income, keeping in mind the fact that such a system prevents anyone's receiving a ruble that is not earned. Pay for work only--for the quality of work! But how does one begin? By analyzing the indicators of each subdivision. For example: Economists calculated that the farm, headed by N. Karpenko, had been spending 30.8 percent of its gross income on payments for labor. They took this percentage as the basis for determining standard deductions, which were set for the entire period of the 5-year plan. As income grew, so the stockmen's earnings would rise. Conversely, a decline in income would trigger a reduction of the payment fund.

The farm had two possible ways to improve earnings--to raise the milk yield or else to lower its production cost. The collective exploited them both. In the past year gross income exceeded the first years of the previous 5-year plan by 142,000 rubles. Of these, 88,000 rubles were gained through growth in production volume, and 54,000 rubles constituted a surplus in savings. Collective earnings rose by 35 percent. And the effect of all this has been felt. The annual surplus amounted to almost 500 rubles per person. On the average, 185 rubles directly attributable to saving resources were paid out to each person.

They key to payment by gross income is the principle of self-financing [samookupayemost]. Last year the farm collective earned 157,000 rubles. To net this amount they had to sell milk worth 814,000 rubles.

Before successfully assimilating the new system of payments, the kolkhoz finetuned the cost-accounting system, and, of course, managers and experts explained carefully to the people the changes that were called for.

Here is the result. Now each participant feels as if he were the production boss. For example, the stockmen themselves maintain the farms without turning to construction workers for petty details. Ordinarily a work brigade performs an average of a thousand rubles worth of such repair work a month. So gross income increases by a comparable amount. Does it pay? Without a doubt.

The incentives are obvious and simple to comprehend. Instead of a variety of different bonuses (for above-plan output, production volume increase, economizing on expenditures, etc.), there is only one. Moreover, it applies to growers and stockmen the same as it does for managers and experts.

How does the new system look in terms of final results? One kolkhoz livestock section raised milk and meat production over a 2-year period by 10.3 percent, while expenditures rose in all by no more than 1.2 percent. Whereas before, for every 100 rubles' worth of output expenditures came to 48 rubles, now they are 44 rubles. Meanwhile, over this same period the section has provided an output yield worth 11 million rubles. The farm's net income in just the past year was more than 3 million rubles.

The experience of the farms in Stavropol Kray may also be cited as examples. For 12 years this system has been in use at the Kazminskiy Kolkhoz, where harvests, milk yields, and weight gains have been on the rise with ever stronger savings. And all this has been done at less cost. Recently, 30 tractors, 20 seed sowers, 19 harvester-shredders and many other machines have been freed up at a time when field operations are being carried out in record time limits.

In short, the new payment system has gone through many years of testing and demonstrated its effectiveness. The time has come to switch brigades, farms, and the industry as a whole to the new system. This task is posed in the resolution of the CPSU Central Committee and the USSR Council of Ministers "On Further Improving the Economic Mechanism of Managing the Country's Agro-industrial Complex [APK]. The State Agro-industrial Committee and the State Committee for Labor and Social Problems have developed recommendations on the basis of acquired experience.

And just why is this being done now? It is a the initiative of economic planners, managers, specialists of the agro-industrial associations and committees. Some people wait for instructions from above, or else they count on waiting out the reorganization period by standing to one side. They shirk difficulties wherever cost accounting exists only on paperwork, which accounts between subdivisions are unsynchronized, where records are not in order. But then it is easier to establish incentives in economic activity through some form of checkbook control.

Agro-industrial agencies, locally as well as centrally located, should concern themselves with creating conditions conducive to the widespread assimilation of this system. Let us say that the existing system of accounting and accountability is ill-suited to meeting the needs of farms as they try to switch to payment by gross income. Some of the most important indicators are lacking, whereas there are many that no longer have meaning and are now irrelevant. Let's say the sovkhos annual report offers no information on gross income. Is there any necessity, then, for daily tabulations of each tractor operator's fulfillment of standard shifts or the volume of work in hectares of standard plowing?

The opinion prevails at times that the system of pay by gross income is not suited to low-profit farms or those that operate at a loss. This is a mistake. In the Michurin Kolkhoz near Moscow production profitability over the past 5-year plan did not exceed 10 percent. Here nonetheless the new incentive system is being assimilated, cost accounting is gaining control, and things at the kolkhoz, as they say, are on the upswing.

In summary, it may be noted that restructuring the agricultural industry is unthinkable without strengthening in the workers a proprietary sense of responsibility, and there is nothing that nurtures this sense quite so much as authentic cost accounting. In the new economic mechanism of APK, payment by gross income promises to occupy a prominent place.

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